

INTERACTION OF SCIENCE AND THEOLOGY
IN THE CHRISTIAN REFORMED CHURCH, 1900-1930

by

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INTRODUCTION

Immanuel Kant (1724-1804), the great German philosopher, left to the modern world a simple yet profound legacy. The ability to know the sacred and the supernatural, the essence of Christianity, was beyond human reasoning. The term "reasoning," or "rationalism," implies a certain epistemological position throughout this thesis. Reasoning refers to the long-standing tradition in western culture that claimed that truth could be measured only by rational or empirical means. Reasoning discounted faith, wisdom or inspiration as means to knowledge and relegated religious belief either to the successful conclusion of a reasonable argument or to an inferior class of knowledge. The ascendancy of reasoning as the only path to truth began in the sixteenth and seventeenth centuries under the influence of Rene Descartes, Baruch Spinoza, Gottfried Leibniz, John Locke and David Hume.

Science, as it became increasingly dominant in modern thought, insisted upon a certain epistemological method. Facts and other certain observations from sense experiences became the norm in forming theories and ideas about the universe. Realism, empiricism, scientific positivism, and materialism were philosophical products of the rise of scientific reasoning. There was opposition to this scientific reasoning during the late eighteenth and early nineteenth centuries in the form of idealism and romanticism. These philosophical

positions de-emphasized the role of facts and sense experiences and focused on the subjective and metaphysical acquisition of knowledge. The question of what it meant "to know" was very important in nineteenth-century intellectual circles. This thesis broadly deals with this epistemological struggle.

In light of this legacy, nineteenth-century intellectuals reexamined the role of theology. If theology could not know (in the sense that a scientist knows water is composed of two parts oxygen and one part hydrogen) God's character or discover his role in the universe, then what was the purpose or importance of theology? Theology was considered the queen of the sciences during much of the Christian era, but during the nineteenth century it struggled to find acceptance and recognition. The nineteenth century has been called the "age of science" and it was the century that gave to modern western culture materialism, agnosticism and positivism. This thesis examines the broad pattern of theological responses to the crisis of theology as well as the particular response of the Christian Reformed Church in the first three decades of the twentieth century.

There were three major groups of theologians and philosophers within American Protestant Christianity that struggled with the relationship between theology and science in the later half of the nineteenth century: the

traditionalists, liberals, and modernists.¹ The traditionalists can broadly be defined as conservative and moderate British Calvinists who sought to give back to theology its former status by arguing that theological propositions could be known using reasonable means. The liberal theologians were transdenominational and attempted to redefine theology in light of Kant's proclamation. Liberals believed that scientific knowledge was reasonable while theological knowledge was subjective, dealing with morals and feelings. The modernists deified science and the evolutionary process and believed that any spiritual discussion was meaningless and primitive.² God and his actions were generally viewed as identical to nature. Humanity could have ethics and even religion but they were to be based on natural laws. There appear to be two major distinctions between the modernists and the liberals. First, liberals tended to identify a dual nature in humanity - spiritual and natural. Modernist's saw humanity as composed of only the natural. Secondly, liberals used the

¹ These descriptive labels are not unique, I must recognize the works of Ian Barbour as instrumental in the formation of my interest in the relationship between science and theology. Barbour is Professor of Religion and Physics at Carlton College and author of many books and articles on the broad issue of science and religion. See Ian G. Barbour, Issues in Science and Religion (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966); Barbour, ed., Science and Religion: New Perspectives on the Dialogue (New York: Harper Forum Books, 1968); and Myths, Models and Paradigms: A Comparative Study in Science and Religion (New York: Harper & Row, 1974).

² Barbour, Issues, pp. 101-4.

theory of evolution as an example or model. The modernists used it as the linchpin of their system.

The Christian Reformed Church also struggled with the relationship between theology and rationality but its views on the subject introduces a fourth position. It is the purpose of this thesis to examine the origin, nature, and results of the Christian Reformed model of interaction between theology and science. This model, which will be called the complementary model, envisioned a relationship where theological and scientific knowledge were epistemologically equal. It is the contention of this thesis that the complementary model assisted in maintaining a balance between science and theology which resulted in both the continuance of conservative theological thinking and a genuine interest in the pursuit of scientific knowledge.

The idea that scientific and theological knowledge were epistemologically equal was not a common philosophical position in the nineteenth century. The Christian Reformed system of thought argued, for example, that the theological proposition that Christ was fully God and fully man was as rational as the scientific proposition that atoms are composed of electrons, protons and neutrons. However, equality was not achieved by arguing that theological knowledge was objective and scientific, but that scientific knowledge was rational yet subjective. In a sense, the philosophical system of the Christian Reformed Church, to secure a place of honor for

theology, insisted that scientific knowledge was not as reasonable or objective as many believed.

The complementary model was different from those models held by the traditionalists or the liberals. The traditionalists disagreed with Kant. They believed that theological propositions could be known with the same degree of certainty that a scientist knows the composition of water. Theological propositions, such as God exists, were reasonable because they could be known using human reasoning. The philosophical school of Thomas Reid (1770-1796), called Common Sense Realism, was influential in the traditionalist's response. Reidian thought assumed that a sure structure of knowledge could be built on a firm foundation of indubitable certitudes. These certitudes, or first principles, were seen as the basis for a universal science. These principles established reasonable proof for scientific as well as theological propositions. George Marsden, historian of fundamentalism and nineteenth-century evangelicalism, described the first principles endorsed by Reid.

Not only did he include states of consciousness, self-evidently necessary truths, and those things evident to our senses, he affirmed also that virtually all normal adults inevitably hold such basic beliefs as the connection between cause and effect, the general regularity in nature, the predictability of some human behavior, the relationship between past and present, the existence of other minds, the continuity of one's self and others, the reliability of their clear and distinct memories, the trustworthiness of the

testimony of others under certain conditions, and the difference between right and wrong.³

It was the belief in the universality of these common sense principles that enabled the traditionalists to argue that theological propositions were reasonable.

Natural theology, the study of the existence and attributes of God made manifest to human reasoning through the works of nature, was an obvious outcome of Reidian thought. The works of William Paley (1743-1805) and William Whewell (1794-1866) ⁴ were attempts to demonstrate that theological propositions could be known "scientifically" (i.e. using reason). Natural theology tended to put theological propositions in a precarious position - dependence on human reasoning and the near-universal acceptance of a set of first principles. The advent of evolutionary thinking critically challenged the traditionalist's first principles and their system of thought.

Natural theology and the entire Reidian system of thought quickly crumbled in the later half of the nineteenth century, leaving the traditionalists in a disorganized and defensive

³ George Marsden, "The Collapse of American Evangelical Academia," in Faith and Rationality: Reason and Belief in God, eds. Alvin Plantinga and Nicholas Wolterstorff (Notre Dame: University of Notre Dame Press, 1983), p. 226.

⁴ William Paley, Natural Theology: or Evidences of the Existence and Attributes of the Deity, 12th ed. (London: Printed for J. Faulder, 1809); and William Whewell, Astronomy and General Physics Considered with Reference to Natural Theology (Philadelphia: Carey, Lea and Blanchard, 1833).

position. Their attempt to refute Kant by insisting that theological propositions were reasonable and scientific was foiled by the reasonable and scientific arguments of their opponents. A fierce debate ensued in the latter half of the nineteenth century. The traditionalists argued that theological propositions were reasonable based on scientific arguments. Their opponents argued the opposite - theological propositions were not reasonable based on scientific arguments. History shows that the traditionalist position was increasingly ignored.

Liberal theologians accepted the basic Kantian premise that nothing could be known of a transcendent God or the supernatural through human reasoning. In removing any vestige of a transcendent God or the supernatural, they redefined the terminology of traditional theology. God became immanent and miracles, the divinity of Jesus Christ, belief in the inspiration of Scripture and any other teaching that implied a connection between the natural and the supernatural were modified. Theology became the study of the moral and ethical dimensions of humanity. Liberal theology, while it played an important role in defining the moral and ethical obligations of society and even science, was subjective and its propositions were not viewed as epistemologically equal to scientific propositions.

Both views of the relationship between theology and science failed to give theology its past honor and status.

After Darwin, there were two sets of first principles, evolutionary and traditional. The traditionalists continued to argue for the reasonableness of theological propositions. The traditionalist's view of the relationship between theology and science lost credibility when the common sense first principles suddenly changed to reflect an evolutionary bias. On the other hand, those that accepted the materialistic and naturalistic assumption of evolution argued that scientific evidence did not prove the reasonableness of theological proposition. Eventually, in the twentieth century when the evolutionary first principles received almost universal acceptance in the intellectual world, the traditionalist's claim that theology was scientifically reasonable was virtually ignored.

The liberal model of the relationship between theology and science was never viewed as an attempt to give to theology its pre-Kantian status. Kantian thought ensured the earth-bound fate of theology. Theology had a high calling, to be sure, to preach the good news that humanity could rise above its animal nature by maintaining high moral and ethical standards. But, knowledge obtained through liberal theology was subjective and clearly not on the same level of epistemological certainty as knowledge obtained from human reasoning.

The origins of the Christian Reformed thinking can be traced to Abraham Kuyper (1837-1920), Dutch Calvinist,

theologian and statesman. It was his desire to construct a Christian philosophy and in doing so reestablish Calvinism. Hence, his movement has been called Neo-Calvinism. He was also a Kantian, although his use of Kant was limited to furthering his idea of Calvinism. It was his genius that enabled him to forge a Christian philosophy out of Calvinism and Kantianism. It was this Neo-Calvinist system that provided the Christian Reformed intellectuals with the necessary building blocks for their complementary model.

Historians of the past century have seriously questioned the ability to maintain a meaningful relationship between conservative Christianity and science. Much has been written on the biased, but very influential, account of John William Draper (1811-1882) entitled A History of the Conflict between Religion and Science (1874).⁵ Draper's account was in actuality a vitriolic broadside against Catholicism and had very little to say about the broader issue of science and religion. In spite of being riddled with historical inaccuracies, his book became very popular. It was generally assumed in intellectual as well as popular circles for many decades after, that science and religion had little in common

⁵John Draper, History of the Conflict between Religion and Science, International Science Series, vol. 13 (London: Henry S. King and Co., 1875). See also James R. Moore, The Post-Darwinian Controversies: A Study of the Protestant Struggles to Come to Terms with Darwin in Great Britain and America, 1870-1900 (Cambridge: Cambridge University Press, 1979), pp. 19-31 for a detailed analysis of Draper's History.

and were, in most cases, bitter enemies.

A History of the Warfare of Science and Theology in Christendom by Andrew Dickson White (1832-1918) followed Draper's Conflict in 1896.⁶ White was a historian who taught at the University of Michigan and served in the New York Senate before becoming the first president of Cornell University. "White's Warfare," explains David Lindberg and Ronald Numbers, both historians of science at The University of Wisconsin-Madison:

Did not sell as briskly as Draper's Conflict, but in the end it proved more influential, partly, it seems, because Draper's strident anti-Catholicism soon dated his work, and because White's impressive documentation gave the appearance of sound scholarship.⁷

The works of Draper and White, the anti-intellectualism of the fundamentalists and the general anti-evolutionary flavor of conservative Protestantism, convinced many intellectuals well into the 1950's that science and conservative Christianity had nothing at all in common.⁸

⁶Andrew D. White, A History of the Warfare of Science with Theology in Christendom, 2 vols. (London: Macmillan, 1896).

⁷David C. Lindberg and Ronald L. Numbers, eds., God and Nature: Historical Essays on the Encounter between Christianity and Science (Berkeley: University of California Press, 1986), p. 3.

⁸Maynard Shipley, The War on Modern Science: A Short History of the Fundamentalist Attacks on Evolution and Modernism (New York: Alfred A. Knoff, 1927); Richard Hofstadter, Anti-Intellectualism in American Life (New York: Alfred A. Knoff, 1963); and Norman Furniss, The Fundamentalist Controversy, 1918-1933 (New Haven: Yale University Press, 1954). It was assumed by these writers, and others, that

To accept the conclusions of Draper and White is to ignore the long and complex history of the struggle to come to grips with the relationship between science and theology. The conclusions reached by Draper and White, and the others who wrote after them, should not be viewed as final answers to the problem of the interaction between theology and science but as important evidence of the view of one group of participants in this age-old debate.

The complementary model of the Christian Reformed Church was unique in the fifty years after Darwin because it attempted to treat both theology and science equally. Both were seen as attempting to discover a portion of the Truth. Theology, while essentially different from science, was considered equal in its own right and not because its propositions could be proved or validated by science. What was envisioned philosophically also worked in the day-to-day world; very few problems arose in the Christian Reformed Church that were caused by conflict between science and theology. Science was not restrained or feared, but was openly embraced. Yet, theology was not swallowed up by science. Theology maintained its independence and as a result the denomination retained its theological conservativeness. To use a scriptural metaphor, the lion was lying down with the lamb.

conservative Christianity and science were bitter enemies.

I. HISTORY OF THE CHRISTIAN REFORMED CHURCH

Much has been written about the Christian Reformed Church but nearly all of it has been written by those within the denomination for in-house consumption. This is understandable because until the 1950's the Christian Reformed Church made little impact on the religious or social life of America. Since the 1960's, however, the denomination has been in the forefront of the evangelical movement in the United States. Many of the leading scholars of modern evangelicalism have roots in the Christian Reformed Church. But, for most of its history the denomination was small and insular with a strong desire for sound Reformed doctrine flavored with Germanic philosophical thinking.

Insularity has resulted in histories that, while scholarly, tend to be uncritical in that they gloss over inconsistencies in theology, theological "civil wars," and social or ethnic peculiarities so common in any social group. However, these volumes provide valuable insight into the religious and philosophical heritage of the denomination. John H. Kromminga's The Christian Reformed Church: A Study in Orthodoxy (1949), Dietrich Kromminga's The Christian Reformed Tradition: From the Reformation to the Present (1943), and Henry Zwaanstra's Reformed Thought and Experience in a New World: A Study of the Christian Reformed Church and its

American Environment (1973) represent monographs that are scholarly but lack critical analysis.¹

Since the 1970's, studies have been made by scholars who, while still influenced by the ethnic and religious environment of the denomination, have written from more objective and critical viewpoints. The major reason, it seems, is that these authors are aware that they are writing to a larger audience than the writers of previous generations. Intellectual, social, historical, and religious analyses of the denomination are seen as useful for understanding a small but important segment of American evangelicalism. James Bratt's Dutch Calvinism in Modern America: A History of a Conservative Subculture (1984) is a scholarly and objective account that deals critically with the cultural and intellectual history of the group.² Also, the works of the historian Robert Swierenga and the sociologist Gary Bouma are intended for consumption by scholars beyond the Christian Reformed Church.³

¹John H. Kromminga, The Christian Reformed Church: A Study in Orthodoxy (Grand Rapids: Baker Book House, 1949); Dietrich H. Kromminga, The Christian Reformed Tradition: From the Reformation to the Present (Grand Rapids: Wm B. Eerdmans Publishing Co., 1943); and Henry Zwaanstra, Reformed Thought and Experience in a New World: A Study of the Christian Reformed Church and Its American Environment, 1890-1918 (Kampen, the Netherlands: J. H. Kok, 1973).

²James D. Bratt, Dutch Calvinism in Modern America: A History of a Conservative Subculture (Grand Rapids: William B. Eerdmans Publishing Company, 1984).

³Robert P. Swierenga, ed., They Came to Stay: Dutch Immigration to North America, 1782-1982 (New Brunswick, N.J.: Rutgers University Press, 1984); Swierenga, ed., The Dutch in America: Immigration, Settlement, and Cultural Change (New

The history of the Christian Reformed Church begins with a group of religious dissidents in the Netherlands during the 1830's and 40's, called the Seceders.⁴ The Seceders were initially pietists discontented with the excessive rationalism and humanism of the National Reformed Church. While the major reason for secession was the perceived lack of piety, the Seceders also felt disinherited because the Dutch social elite had monopolized the ruling body of the church.

Three groups, principally divided by their views on church polity and their emphases on personal piety, made up the Seceders. Hendrik de Cock (1801-1842) and Simon Van Velzen (1819-1896) envisioned a revitalized national church. They saw potential in the church and desired to work within the body to create a strong central General Assembly and a unified doctrinal stance based on the Reformational creeds. Albertus Van Raalte (1811-1876) and Antonie Brummelkamp (1811-1888) also wanted a General Assembly but wanted most of the power kept at the local congregational level, fearing continued usurpation by the rich and powerful. Van Raalte and Brummelkamp favored experiential and personal piety over the Confessional unity of de Cock and Van Velzen. The third group

Brunswick, N.J.: Rutgers University Press, 1985); Gary D. Bouma, "Keeping the Faithful: Patterns of Membership Retention in the Christian Reformed Church," Sociological Analysis 41 (Fall 1980): 259-64; and Bouma, "The Real Reason One Conservative Church Grew," Review of Religious Research 20 (Spring 1979): 127-37.

⁴Bratt, Dutch Calvinism, pp. 3-13.

within the Seceders was controlled by Hendrik Scholte (1805-1868). Scholte wanted complete local independence with no hierarchical structure. He placed little value on doctrinal or confessional purity, stressing instead the conversion experience and personal piety.

The Seceders became increasingly isolated from the national church and Van Raalte and Scholte became convinced that God had abandoned the Netherlands because of its spiritual laxity, gross materialism and negative influence on those who were still pious.⁵ They began to look to America because it appeared to offer a wholesome environment for the family, self-sufficiency and religious freedom. Scholte emigrated to Iowa, founding the town of Pella. Van Raalte and his group settled in the Holland, Michigan area in 1846-7. The Christian Reformed Church began from a small group of Van Raalte's people about a decade after the founding of this settlement.

In 1856, to save his colony from poverty, isolation and possible extinction, Van Raalte decided to join the Reformed Church in America. The Reformed Church in America, while historically Dutch, was viewed as thoroughly American by the mid-nineteenth century. Many of Van Raalte's followers felt that the denomination had absorbed too many of the negative characteristics found in American culture. They distrusted

⁵ Ibid., p. 10.

the "American East" and doubted the doctrinal and liturgical purity of the denomination. The decision to join the Reformed Church in America divided the colony into those opposing the union and those in favor of it.

In 1857, four congregations broke from the colony to "return to the standpoint of the fathers" by forming the Christian Reformed Church.⁶ The new denomination did not flourish, and in 1863 serious consideration was given to discontinuing the endeavor. This proposal was rejected but the church was on the edge of extinction for the next twenty years. In the 1880's, circumstances beyond the control of the denomination ensured its survival.

In 1880 four classes⁷ of the Reformed Church in America petitioned its synod to make a definite stand against Freemasonry. When the synod refused explicitly to condemn the society, many families and whole congregations within the four classes joined the Christian Reformed Church. A few years later, the leadership of the Christian Reformed Church (Christelijke Gereformeerde Kerk) in the Netherlands, of which Abraham Kuyper was both a member and leader, officially began to encourage its emigrating members to join the American

⁶Ibid., p. 39.

⁷"Classis" is a term used frequently in Presbyterian forms of church government. A classis is formed by a number of congregations in a defined region. The classis sends delegates to a national policy making body, usually called a Synod or General Assembly.

Christian Reformed Church as opposed to the Reformed Church in America. The Reformed Church increasingly was viewed by emigrants as too American, too tolerant of conflicting theologies and too loose in Reformed doctrine. The Christian Reformed Church, on the other hand, was known as the haven for Dutch culture, Reformed orthodoxy and strict adherence to the historic creeds of the Reformed tradition.⁸ Consequently, the number of members increased dramatically during the late 1880's and 90's, and the question of survival was finally put aside. For example, in 1880, the denomination had 2014 families while by 1890 that number had increased to 7573.⁹

It is understandable, then, why it was not until the turn of the century that any serious discussion among the leadership of the role of the Christian Reformed Church in American society or other broader issues. While the wave of emigrants in the 1880's ensured the survival of the denomination, its leadership was not prepared to look outside of the denomination until after 1900. For example, it was only after 1900 that there were a large number of articles in the denomination's publications on the advantages and disadvantages of becoming Americans. Also, issues such as the use of English and the influence of public education on the purity of children became increasingly important after 1900.

⁸ Bratt, Dutch Calvinism, pp. 37-46.

⁹ Zwaanstra, Reformed Thought, pp. 5-7.

Finally, like the Puritans of the seventeenth century, many of the progressive leaders used the imagery of a divine calling to instill in their new homeland the blessings and virtues of Calvinism. Albert Rooks, first Dean of Calvin College, wrote that one reason for acquiring an education at Calvin College was to create "most efficient disseminators of our Reformed principles."¹⁰ Other progressives argued that laymen should get involved in American culture and society and thereby assist in its betterment.¹¹

As the Christian Reformed Church entered the twentieth century a number of enduring characteristics can be identified. First, throughout most of its history, at least into the 1960's, the Christian Reformed Church had remained culturally, ethnically and theologically homogenous. It was axiomatic that if a person were a member of the Christian Reformed Church, that person was of Dutch descent. This association carried with it certain other cultural traits that encouraged homogeneity. First, these Dutch-Americans were insular, preferring to receive a vast majority of their cultural, philosophical and theological input from Holland rather than from their new homeland. As James Bratt, leading

¹⁰ Albert Rooks, "Why Go to Calvin College," The Banner, August 25, 1910, p. 531.

¹¹ Bratt, Dutch Calvinism, pp. 67-79 discusses early (1900-1915) attempts by members of the Christian Reformed Church to enter local politics in Grand Rapids.

scholar on the social and cultural history of this ethnic group, said:

If any group should have "melted" into American society, it is these people with their northwest European origins, their nearly Anglo-Saxon lineage, their Protestant religion and Protestant ethic.¹²

Yet, they insisted on separating themselves from much of American culture and especially American religion.

"Americanization"¹³ was resisted until after World War I because it was viewed as a force bent on destroying the denomination's Calvinist uniqueness and replacing it with some form of modernism.¹⁴ While there was a spectrum of opinions on the dangers and benefits of Americanization, all leaders of the church feared the effects of rapid assimilation. The question of whether they were Dutch in America, Dutch-Americans, or Americans was a question that was hotly debated during most of this period. Fear of their new homeland was religiously motivated.¹⁵ Klaas Schoolland, a vocal opponent of Americanization, expressed caution when he said:

Calvinism [is] in this our new fatherland in great danger of degenerating, yes, even of perishing. The spiritual atmosphere [here is laden] with heretical

¹² Bratt, Dutch Calvinism, p. ix.

¹³ This was a term often used by these Dutch-American to describe the process of blending into the American way-of-life. Acculturation would be a more precise, sociological term.

¹⁴ Barend K. Kuiper, The Proposed Calvinistic College at Grand Rapids (Grand Rapids: Sevensma, 1903), pp. 31-36.

¹⁵ Bratt, Dutch Calvinism, pp. 55-66.

doctrine and human practices in the ecclesiastical area, and with revolutionary ideas and purely humanistic hobbies on the broad terrain of Family, Society, and State.¹⁶

However, the consensus by 1920, accelerated by the fact that the Dutch were frequently identified as German sympathizers during World War I, was that they were Dutch-Americans. English became the accepted language in church and school and they became patriotic, industrious Americans who found they fit well into the economic and social structure of America.

Secondly, their religion was another important reason for the homogeneity of the ethnic group. Religion was their cultural adhesive. Bratt said:

For Dutch America, theology has supplied the terms, and the church and its subsidiaries have supplied the forum, of intellectual discourse. Their cultural record is hardly truncated on this account, however, for if there is one thing these people have insisted on, it is that religion includes all of life, that it stand as the course and judge of all other human activity....¹⁷

The church became the heart of each community. Discussion of theological minutiae was the avocation of even the laypeople. The official paper of the denomination, De Wachter, was dominated by theological discussion and application. Preoccupation with theology created interested and well-informed constituents, promoted a strong denominational

¹⁶ Ibid., p. 60.

¹⁷ Ibid., p. ix.

consciousness, and exegesis in De Wachter by prominent Calvinists in Holland maintained ties with the Netherlands.¹⁸ Also, those that moved to areas other than the original "kolonies" quickly formed new Dutch settlements or moved to already established settlements to protect their theological and ethnic heritage.

The Christian Reformed theology was also homogenous because the denomination was rigidly creedal. The Belgic Confession (1561), The Heidelberg Catechism (1563), and The Canons of Dort (1619) were the Reformational creeds upon which the Christian Reformed Church established doctrine and determined orthodoxy and heresy. Scripture was interpreted through the lens of the creeds, it was not allowed to speak for itself. Strict allegiance to these creeds ensured that differences would be minor.

A third factor influencing homogeneity was their strong support for parochial education. This support was largely influenced by their fear of American public education. Nineteen years after the denomination broke from the Reformed Church of America and while the survival of the venture was still somewhat debatable, the Theological School, later Calvin

¹⁸ Kromminga, Christian Reformed Church, pp. 41-62. In this section he discusses the widespread interest among the laypeople in theological problems such as Supralapsarianism and Infralapsarianism, the purpose of Baptism, and the authority of the government.

Theological Seminary, was begun.¹⁹ The school was established to provide scholarly ministers and also to prevent future ministers from being tainted as they attended American seminaries such as Western Theological Seminary or Princeton.²⁰ Calvin College was begun as the Literary Department of the Theological School in 1894. By 1907, the Literary Department had become a junior college, John Calvin Junior College.²¹ The impetus to keep the denomination untainted by providing private education began as early as the 1880's.²² "Day-schools" were being established in numerous Dutch-American communities because the public schools could not be expected to inculcate a Reformed world view. It was not so much that they felt the schools were bad or evil, they simply desired to protect the impressionable minds of their "covenant" children. Schools eventually appeared where ever there was a Christian Reformed community large enough to support one. This emphasis on

¹⁹ John J. Timmerman, Promises to Keep: A Centennial History of Calvin College (Grand Rapids: William B. Eerdmans, 1975), pp. 13-45 and G. D. De Jong, "The History of the Development of the Theological School," in Semi-Centennial Volume: Theological School and Calvin College, 1876-1926, ed. The Semi-Centennial Committee (Grand Rapids: Theological School and Calvin College, 1926), pp. 20-48.

²⁰ Western Theological Seminary was part of the Reformed Church in America and located in Holland, Michigan. Often ministers did go to Princeton to obtain advanced degrees. To obtain an advanced degree, after a minister had attended the theological school, was considered doctrinally "safe."

²¹ Timmerman, Promises to Keep, pp. 24-45.

²² Kromminga, Christian Reformed Church, pp. 134-45.

Christian education made it possible for the denomination to control what the children learned, and aided in maintaining the homogeneity of the group.

Finally, homogeneity was ensured by the limited size and geographical centrality of the intelligentsia. The leadership, during this period, was clustered primarily in the Western Michigan area and Chicago and was composed of the faculty of Calvin College, the Theological School, and the clergy.²³ There were less than 250 clergy and faculty in the Christian Reformed Church in 1920 and most were within 50 miles of Grand Rapids, Michigan.²⁴ Since the ethnic, religious and even economic heritage of these leaders were so similar, fundamental disagreement was infrequent.

Homogeneity, reinforced by their strong ethnic identity, the centrality of religion, the importance of locally controlled education, and size and geographical centrality assisted in maintaining the relatively fragile synthesis between Kant and Calvin. The world view and intellectual and cultural heritage of the leadership enabled them to agree on many of the essentials of Neo-Calvinism.

²³ Calvin College and the Theological School (later Calvin Theological Seminary) were the most influential centers of learning in the Christian Reformed Church during the period 1900 to 1930 and afterward. These school established the theological and religious tenor of the entire denomination.

²⁴ Kromminga, Christian Reformed Church, p. 235.

A second enduring characteristic was the philosophical orientation toward Germany. While it is dangerous to identify a particular philosophical tendency with a nation, German philosophy has tended toward the idealistic, the romantic, the spiritual and the mystical.²⁵ Germany, for example, was the birthplace of the Reformation, the idealism of Hegel, the romanticism of Goethe, and the vitalism of Hans Driesch (1867-1941). Liberal theology, with its new definition of God and the identification of humanity's "godness", found its first expression in Germany. Even the scientific methods that have arisen out of German intellectual soil have emphasized speculation, metaphysical qualities and rationalism.²⁶ It was very popular in German intellectual circles, for example, in the nineteenth century to talk about the "organism of science". This was an idealistic notion that taught that the knowledge from the various disciplines, from art to zoology, were "organs" in the body of science.²⁷ If one discipline was

²⁵ William Bossenbrook, The German Mind (Detroit: Wayne State University, 1961) and Ernst Breisach, Historiography: Ancient, Medieval, and Modern (Chicago: University of Chicago Press, 1983), pp. 215-91.

²⁶ By rationalism is meant the epistemological belief that knowledge can be obtained by non-empirical reasoning. Rationalism stressed the activity of the mind over the activity of the senses. Rene Descartes is considered the modern founder of this school of thought.

²⁷ See especially Ernst Cassirer, The Problem of Knowledge: Philosophy, Science, and History Since Hegel, trans., William H. Woglom and Charles W. Hendel (New Haven: Yale University Press, 1950); and Alexander Gode-von Aesch, Natural Science in German Romanticism (New York: Columbia University Press, 1941), pp. 114-119. Leading spokesmen of

neglected, the organism, and consequently knowledge and truth, would be distorted.

This Germanic influence was counter to the dominant philosophical tradition in America. In his study entitled Science and Religion in America, 1800-1860, historian Herbert Hovenkamp demonstrated that both science and religion in America were heavily influenced by Baconian and Common Sense Realism.²⁸ These philosophies were British in origin and diametrically opposed to many of the assumptions and principles of Germanic thought. Empiricism, realism and sense experience dominated American thought in the nineteenth century and were still influential in Presbyterian and fundamentalist circles well into the twentieth century even though they were of less value to the general intellectual community.

The opinion held by these Dutch-Americans of the British, and by logical extension Americans, was very low. They found the pragmatic nature of Americans difficult to understand, especially when deep philosophical or theological questions were involved. The utilitarian nature of the British, many of these Dutch-Americans believed, kept them from serious

this movement were Johann Herder (1744-1803), Franz von Baader (1765-1841) and Johann Fichte (1762-1814).

²⁸ Herbert Hovenkamp, Science and Religion in America, 1800-1860 (Philadelphia: University of Pennsylvania Press, 1978); and Theodore D. Bozeman, Protestants in an Age of Science (Chapel Hill: University of North Carolina Press, 1977), pp. 3-31.

philosophical and theological considerations. They questioned the genuineness of American Christianity, calling it "superficial", "individualistic" and "Methodistic."²⁹ For example, one Christian Reformed minister described English and American Christianity as "very busy," it asked "What must I do?" rather than "What must I be and then do?"³⁰ This difference in attitude he attributed to the "deep" way of thinking of the Dutch as opposed to the shallow, utilitarian thinking of the British. This attitude toward British and American religion was borne out later, in the 1920's and 1930's, in their critique of fundamentalism.³¹

They steadfastly refused to accept the British philosophical and religious world view. Their intellectual heritage was German and Dutch and it was from Central Europe that they continued to receive philosophical and theological input. Their philosophical world view was more German than English or American and their Calvinism was Dutch rather than British. They looked and acted like Americans during this

²⁹ Bratt pointed out that "Methodism" represented to these Dutch-Americans a certain type of Christianity. A Christianity that emphasized the subjective, the emotions, self, and self-assured. They were not necessarily attacking the Methodist denominations.

³⁰ Foppe Ten Hoor, "Bij het Begin van der Nieuwe Jaargang," Gereformeerde Amerikaan, January 1901, pp. 2-3, quoted in Bratt, Dutch Calvinism, pp. 58-9.

³¹ Joseph H. Hall, "Controversy Over Fundamentalism in the Christian Reformed Church, 1915-1966" (Th.D. dissertation, Concordia Seminary, 1974); and Bratt, Dutch Calvinism, pp. 131-34.

period but philosophically they were German. After 1930, many leaders within the denomination began to accept the philosophical positions of their theological counterparts in America. This led some to abandon much of the framework of their Neo-Calvinist heritage.

Theologically, the Christian Reformed Church was similar to the conservative Presbyterians in America but the incompatibility between their underlying philosophical systems created differing viewpoints on many issues, including the interaction between science and theology. The Christian Reformed Church and the conservative Presbyterians were confessional Calvinists. Ministers from the Christian Reformed Church often attended Princeton Seminary to obtain advanced degrees not offered at Calvin Seminary. In 1888, the United Presbyterian Church invited the Christian Reformed Church to merge with that denomination. The leadership declined the invitation but not for theological reasons. They believed, and rightly so, that their uniqueness would be destroyed and that they would lose their identity.³² Finally, the two most prominent theologians from each group, the Presbyterian Benjamin B. Warfield and the Neo-Calvinist Abraham Kuyper, were in basic agreement on the essentials of Calvinistic Christianity. But it will be demonstrated in later chapters that their philosophical, especially epistemological,

³² Zwaanstra, Reformed Thought, pp. 5-22.

differences caused each group to develop fundamentally different models of interaction between science and theology.

Philosophical incompatibility was most evident in the area of human rationality and epistemology.³³ Presbyterians, immersed in Baconianism and Common Sense Realism, believed rationality was uniform and that all humans responded to stimuli in very similar fashion. There was, Presbyterian scholars argued, no difference in the way a Christian or a non-Christian observed and interpreted the world. Therefore, the variable in this epistemology was the "fact". Which facts were observed and how many were observed became important to Presbyterians. As appropriate facts were accumulated, the conclusion would eventually become self-evident. If a person did not believe God created the world, to use a particular example, it was because the appropriate facts had not been presented in sufficient quantity.

Kuyper, and the Christian Reformed intellectuals, on the other hand, believed rationality was conditioned not by facts but by the interaction between facts and a priori principles that categorized sense experiences. Christians possessed a different set of principles than did non-Christians. Christians, according to Kuyper, did interpret the world differently than non-Christians. According to Kuyper's

³³ Cornelius Van Til, The Defense of the Faith (Philadelphia: The Presbyterian and Reformed Publishing Company, 1955), pp. 261-267.

epistemology, if a person did not believe God created the world, it was because his set of **a priori** principles did not allow him to see the facts of creation clearly. Kuyper was intent, therefore, on developing a philosophy and epistemology that was Christian. These differences were important to early twentieth century Christian Reformed intellectuals and emphasize the gulf that separated British and Dutch Calvinists. And, as will be demonstrated, this philosophical difference was manifested in the construction of two unrelated models of interaction between science and theology.

The third, and final, characteristic was the church's continued commitment to evangelicalism without moving toward fundamentalism. Evangelicalism, like science, is hard to define. Evangelicalism for most of the history of Christianity was synonymous with orthodoxy. Evangelicalism stressed the sovereignty, love and transcendence of God, the ultimate authority of Scripture as the Word of God, and the need for salvation through belief in Jesus Christ.³⁴ Fundamentalism was a sub-set within evangelicalism. George Marsden identified early fundamentalism as:

Militantly anti-modernist Protestant evangelicalism...
[and] a loose, diverse, and changing federation of co-
belligerents united by their fierce opposition to

³⁴ Evangelical Dictionary of Theology, 1st ed., s.v. "Evangelicalism," by R.V. Pierard.

modernist attempts to bring Christianity into line with modern thought.³⁵

Theologically defined, fundamentalism was reductionistic. Fundamentalists sought to reduce Christianity to its essentials. Hence, there was a dearth of systematic thinking in fundamentalist circles and Christianity was condensed into the famous five points.³⁶ Historically defined, fundamentalism grew out of Presbyterianism. Marsden, in Fundamentalism and American Culture, convincingly argued that the world view and philosophical nature of fundamentalism was a product of Princeton theology and patterned after Baconian and Common Sense Realism.³⁷ Early fundamentalism was a militant, theologically reductionist evangelical movement which relied heavily on British religious and philosophical thought.

The question of whether the leaders of the Christian Reformed Church were fundamentalists is important because fundamentalistic assumptions of science were very similar to those held by conservative Presbyterians. Marsden wrote in Understanding Fundamentalist Views of Science that fundamentalists were not obscurantists or anti-intellectuals

³⁵ George M. Marsden, Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism, 1870-1925 (Oxford: Oxford University Press, 1980), p. 4.

³⁶ In 1910 the Presbyterian General Assembly approved a five-point doctrinal statement. The five points were 1) the inerrancy of Scripture, 2) the Virgin birth of Christ, 3) his atonement, 4) his bodily resurrection, and 5) the reality of miracles. See Marsden, Fundamentalism, pp. 118-23.

³⁷ Ibid., pp. 11-39, 102-138.

in their attitude toward science. Rather, fundamentalists accepted the Baconian scientific methodology and the philosophical assumptions of Common Sense Realism.³⁸ If the leadership of the Christian Reformed Church was fundamentalistic, then much of what is said about the Christian Reformed model of interaction between science and theology in this thesis would be suspect. The problem is compounded by the fact that superficially, early fundamentalism and the Christian Reformed Church had much in common.³⁹

First, during the modernist-fundamentalist controversies of the 1920's, the leadership of the church consistently sided with fundamentalists. In the overall battle for souls and in the struggle to usher in the Kingdom of God, the leadership saw the fundamentalists as allies. Second, the leadership of the Christian Reformed Church stood fast on the inerrancy of scripture. Like the fundamentalists they saw the Bible as the

³⁸ George M. Marsden, "Understanding Fundamentalist Views of Science," in Science and Creationism, ed. Ashley Montagu (New York: Oxford University Press, 1984), pp. 95-116.

³⁹ John Kromminga noted a certain sympathy toward fundamentalism among the laypeople. He said, "In seeking to answer this question [will joining an association of evangelicals force the CRC to reduce their theology to fundamental points], it must be admitted that there is much sympathy with and some tendency toward Fundamentalism among the rank and file of the church membership." Kromminga, Christian Reformed Church, p. 118; and Bratt, Dutch Calvinism, pp. 131-133 also discusses the various fundamentalistic issues, i.e. premillennialism, that surfaced in the denomination.

ultimate arbitrator of life. Church leaders refused to endorse, however, the literalism of the fundamentalists viewing their position as too narrow. Third, they took a very uncompromising stand against evolutionism, the naturalistic and atheistic philosophies that accompanied the scientific theory of evolution. While this thesis will demonstrate that the response to the theory of evolution by Christian Reformed intellectuals was very complex, on the surface the leaders sounded "fundamentalistic." For example, in 1923, Hessel Bouma (1884-1971), minister and theologians, stated:

All real evolutionists are absolutely opposed to all teleology...I feel this negative point must be mentioned because it rules God practically out of existence, wherefore, no Christian can be an evolutionist.⁴⁰

Finally, even the social temperaments of both groups were similar in that they valued separation from the world. Their reasons may have differed but isolation and separation were seen as means of protection. The Christian Reformed leaders saw strength in isolation and from this isolation would come Christian warriors fitted for the service of Christ. Separation was to be a temporary thing, part of the process of Christian maturity. The fundamentalist, however, saw isolation more as retrenchment. The forces of the world were too pervasive, so Christians had to retreat to survive.

⁴⁰ Hessel Bouma, "Evolution and Creation," Religion and Culture 5 (September 1923):83.

The differences between the Christian Reformed Church and the fundamentalist were, however, much deeper and more significant than the similarities. Joseph Hall concluded in his dissertation, The Controversy over Fundamentalism in the Christian Reformed Church, 1915-1966, that the

Christian Reformed Church reaction to Fundamentalism was in the main theological. There existed what might be termed "core" theological objection....These "core" theological objections were that fundamentalists were premillennial-dispensational, were arminian, held to hermeneutical principles of biblicism and literalism, embraced a soteriocentric view of redemption, denied the present rule of Christ, and therefore were escapists.⁴¹

Theologically, no firm bond could be maintained between the Christian Reformed Church and fundamentalism. Cooperation and comradery were possible only because they faced a common enemy - modernism.

Also, it can be added that philosophically the fundamentalists and the leaders of the Christian Reformed Church had little in common. The fundamentalists were comfortable with realism, empiricism and pragmatism. Marsden demonstrated that even the fundamentalist's method of examining the Bible was patterned after Baconian science. Reuben Torrey (1856-1928), close associate of D.L. Moody, described his biblical exegesis as:

Simply an attempt at a careful unbiased, systematic, thorough-going, inductive study and statement of Bible truth....The methods of modern science are applied to

⁴¹ Hall, "Fundamentalism," p. 218.

Bible study - thorough analysis followed by careful synthesis.⁴²

Christian Reformed thinkers, on the other hand, found meaning in the construction of systematic philosophical and theological systems, speculation, and idealism. The fundamentalist accumulated facts and in the process formed theories and ideas. Dutch-Americans surveyed the broad canvas, identifying patterns and principles, and from these reached conclusions.

It is true that because of the pietistic heritage of the Christian Reformed Church and its uneasy alliance with fundamentalists to battle a common foe, many of the laypeople developed a sympathy for the simplicity and orthodoxy of fundamentalism. However, the leadership of the church was diligent to keep distinctively fundamentalistic doctrines out of the denomination.⁴³ They were also, in the period from 1900 to 1930, very conscious of the fact that philosophically the Christian Reformed Church and fundamentalism were separated by a wide theological and philosophical gulf.

⁴² Reuben Torrey, What the Bible Teaches: A Thorough and Comprehensive Study of What the Bible has to Say Concerning the Great Doctrines of which it Treats, p. 1, quoted in George Marsden, Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism, 1870-1925 (New York: Oxford University Press, 1980), p. 60.

⁴³ Bratt, Dutch Calvinism, pp. 95-104 describes a confrontation with premillennialism in 1917.

Comment must be made concerning the use of 1900-1930 as the period under study. Any use of a block of years is artificial because history and ideas do not fit neatly into pigeon-holes called decades. And especially when investigating the history of a philosophical idea, it becomes foolhardy to limit analysis to certain years. In this study, the period 1900-1930 is used to indicate an intellectually formative period in the life of the Christian Reformed Church. During this period the church began a college, struggled with Americanization, and searched for a way to make a transplanted Germanic world-view thrive in "Anglo" soil. Issues such as the relationship between science and theology and evolution were not seriously debated before 1900 and the intellectual climate changed considerably after 1930. In this study, liberty is taken to use documents which were written by individuals whose own intellectually formative years were during this period. Therefore, articles written after 1930 may occasionally be used.

A study of the early decades of the Christian Reformed Church reveals a small, tight-knit ethnic group that was philosophically tied to Germanic thought. Additionally, conservative Confessional Calvinism played an important part in this group's world view. The fact that they were theologically conservative set them against their philosophical kin. Philosophically, they were oriented toward German idealism and rationalism, but their theology kept them

from theological liberalism. The philosophical heritage they brought with them to America, on the other hand, alienated this ethnic group from the Presbyterians and fundamentalists, their theological kin. How they traveled a distinctly different road than those taken by the theological liberals and conservatives in America and how that road led to a unique model of interaction between science and theology is the focus of the next chapters.

II. THE PHILOSOPHICAL AND THEOLOGICAL LEGACY OF ABRAHAM KUYPER

The focus of this chapter is the philosophical and theological heritage of the Christian Reformed Church. Inherent in this analysis will be a discussion of the Dutch Calvinist attempt to formulate a Christian philosophy and epistemology by synthesizing Reformational principles and Kantian thought. Calvinism and Kantianism, brought together in the Neo-Calvinist philosophical system of Abraham Kuyper, played an important role in the development of the Christian Reformed view of the interaction between science and theology.

NEO-CALVINISM

The term Neo-Calvinism was a title given to this movement by its opponents.¹ However, it was accepted and used by Kuyper and others within the movement. Broadly defined, it was an attempt to reestablish the Reformational ideals and religious world view of Calvin as the basis for religion, philosophy, science, every area of life. It was also a movement that was steeped in contemporary German philosophical thought. Neo-Calvinism was not an attempt to simply re-state Calvinist

¹Albert Wolters, "Dutch Neo-Calvinism: Worldview, Philosophy and Rationality," in Rationality in the Calvinian Tradition, eds. Hendrik Hart, Johan Van Der Hoeven, and Nicholas Wolterstorff (Washington, D.C.: University Press of America, 1983), p. 117.

teaching, but it was an attempt to re-interpret Calvin in light of modern thought. For example, Kuyper very infrequently quoted Calvin directly, preferring instead to follow the spirit of Calvinism rather than the letter.

Espousing theological liberalism, Kuyper graduated from Leyden University in 1863.² He was the quintessential continental intellectual, acquainted with German theological and philosophical ideas such as idealism, romanticism and naturalism. He once said of himself, "I was once a Modernist myself."³ He accepted many of the philosophical ideas of Kant, Friedrich Schleiermacher (1768-1834), Johann Gottlieb Fichte (1762-1814), Hegel, and other German intellectuals. Yet, early in his ecclesiastical career, he rejected much of this heritage and embraced conservative Calvinism. However, philosophically he retained much of his liberal past, later molding and reshaping it for service in his new religious world view.

²The following works represent some of the best biographical sources on Kuyper in English. J. Van Lonkhuysen, "Abraham Kuyper: A Modern Calvinist," Princeton Theological Review 19 (1921): 139-147; Justus Van der Kroef, "Abraham Kuyper and the Rise of Neo-Calvinism in the Netherlands," Church History 17 (1948): 316-34; and Bratt, Dutch Calvinism, 14-33. The only full-length book in English is F. Vanden Berg, Abraham Kuyper (Grand Rapids: William B. Eerdmans Company, 1960). Vanden Berg's book is a popular account of his life.

³Abraham Kuyper, "Modernism, A Fata Morgana in the Christian World," in The Reformed Principle of Authority: The Scripture Principle of the Reformation Set forth in the Light of Our Times, by Gerrit Hendrik Hospers (Grand Rapids: The Reformed Press, 1924), p. 34. This essay was originally written in 1870.

Kuyper's Neo-Calvinism was a reaction to the humanistic philosophical systems of the nineteenth century, which he lumped under the title of "Modernism".⁴ The French Revolution was seen as the flood-gate of modernism and the philosophers of the Enlightenment were its chief prophets. It was against this spirit of the age, this unified system of thought, that Kuyper felt compelled to engage in warfare. Kuyper described modernism as a *fata morgana*.⁵ A *fata morgana* was an illusion of great beauty or certainty which if pursued, lured an individual to destruction. Modernism was like a *fata morgana* because, according to Kuyper, it offered illusionary answers to life's deepest riddles. Kuyper offered this analysis of modernism's appeal.

In Modernist circles of course our view of Christianity is considered to be clumsy caricature not answering to the needs of the heart nor fitting in with the times....The heart is too deep, the riddles of life too amazing as to be disposed of so easily [by the Christian caricature]. The thoughtful have perceived this. And so, when Modernism came, which once more put the glory of the ideal in view, which analyzed the human heart, which again inquired after causes, principles and relations,-all this appealed to the inquiring mind.⁶

Modernism offered a system of thought that was compelling

⁴Kuyper, "Modernism," pp. 15-35. It should be noted here that Kuyper used the term modernism to include all forms of thinking that were hostile to orthodox Christianity. His use of modernist is therefore broader than its usage in the rest of this thesis, especially chapter 4.

⁵Ibid., pp. 16-7.

⁶Ibid., pp. 18-9.

because Christianity had either become shallow or was perceived as "behind the times". As a result, Kuyper concluded:

Two life systems are wrestling with one another, in mortal combat. Modernism is bound to build a world of its own from the data of the natural man, and to construct man himself from the data of nature; while, on the other hand, all those who reverently bend the knee to Christ and worship Him as the Son of the living God, and God himself, are bent upon saving the "Christian Heritage."⁷

He felt that such a pervasive world view could only be fought with an equally pervasive Christian world view. And the most "decisive, lawful, and consistent defence for Protestant nations against encroaching, and overwhelming Modernism" was, in Kuyper's mind, Calvinism.⁸

Kuyper's Lectures on Calvinism, delivered as the Stone Lectures at Princeton University in 1898, represented his mature thought on the nature of his Christian philosophy.⁹ Calvinism, Kuyper maintained, was a life-system and not only a particular theology. This life-system, Kuyper wrote:

Is rooted in a form of religion which was peculiarly its own, and from this specific religious consciousness there was developed first a peculiar theology, then a special church-order, and then a given form for political and social life, for the interpretation of the moral world-order, for the relation between nature and grace, between Christianity and the world, between church and state,

⁷Abraham Kuyper, Lectures on Calvinism (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1953), p. 11.

⁸Ibid., p. 12.

⁹Ibid.

and finally for art and science.¹⁰

Neo-Calvinism, then, was a system of thought that was thoroughly grounded in scriptural and Reformational principles. From these principles, Kuyper sought to develop an epistemology and philosophy that would be a worthy opponent of modernism.

Neo-Kantianism provided the philosophical background for Neo-Calvinism. Neo-Kantianism was a system of thought prevalent in late nineteenth century and early twentieth-century Germany.¹¹ Alois Riehl (1844-1924), Hermann Cohen (1842-1918), and the great philosopher of science Ernst Cassirer (1874-1945) were a few of the more ardent supporters of this philosophical position. It was a reaction to the many strains of empiricism that were dominant in Europe during the nineteenth century and that were also hostile to conservative Christianity.

Neo-Kantians, like Kuyper, were more interested in re-interpreting Kant than restating Kantian thought. Neo-Kantians were interested in Kant's epistemological synthesis and its implications for knowledge acquisition. The greatest achievement of Kant, and what Kant himself called his "Copernican Revolution" in philosophy, was the synthesis of

¹⁰Ibid., p. 17.

¹¹Very little has been written in English about Neo-Kantianism. See Ralph B. Perry, Philosophy of the Recent Past (New York: Scribner's Sons, 1926), pp. 145-160.

rationalism and empiricism into a single epistemology. In general terms, he proposed that objects conform to the operations of the mind.¹² Rationalists, such as Rene Descartes (1596-1650) and Georg Wilhelm Friedrich Hegel (1770-1831), believed that knowledge was a product of the operation of the mind. The mind possessed the capacity of knowing without the assistance of the senses. In opposition, the empiricist such as Francis Bacon (1561-1626) and John Stuart Mill (1806-1873), believed that knowledge was derived from sense experiences. Kant believed that the perception of the senses was meaningless until the mind operated on these perceptions and created order. Therefore, both rationalism and empiricism were important components of his philosophy.

Neo-Kantianism opposed the irrationalism of the romantic period and the emphasis on feelings and subjectivism of theological liberalism. Radical idealism as expressed by Hegel and others emphasized, almost to the complete exclusion of the senses, the activity of the mind and subjective thought in the acquisition of knowledge. Knowledge was a product of the inner self and as such did not necessarily reflect an objective reality. Neo-Kantianism accepted the possibility that knowledge could reflect objective reality. Knowledge was possible because of a definite relationship between the object

¹² David Oldroyd, The Arch of Knowledge: An Introductory Study of the History of the Philosophy and Methodology of Science (New York: Methuen, 1986), pp. 123-24.

of study and the mind of the subject.

Neo-Kantianism was also a reaction to the stark empiricism of positivism and scientific materialism so prevalent after Darwin. Empiricism, but especially positivism and materialism, neglected the operation and activity of the mind. Knowledge of the cosmos was established by induction from universally agreed upon observations. The subject had only to amass facts and arrange them in the appropriate order to gain knowledge. Nineteenth-century intellectual Germany was a battleground for idealism and empiricism, the two major epistemological systems in philosophical history. The Neo-Kantians revived Kant's attempt to synthesize both into a functional philosophy. However, Kantian thought was only loosely followed by the Neo-Kantians, being careful to observe the spirit of Kant rather than the letter of Kant's thought. It was within this philosophical context that Neo-Calvinism was established.

Neo-Calvinism can be categorized as "objective idealism" because it was an idealist philosophy that was anti-naturalist without being anti-realist. It rejected the radical empiricist position that only natural objects existed and that knowledge was obtainable only through the senses. However, it also rejected the radical idealist position that knowledge was obtainable only through rational thought. Neo-Calvinism believed that natural objects were a necessary component of the quest for knowledge. Therefore, the existence and

importance of the natural universe was recognized but also the transcendental, or supernatural, was seen as an essential ingredient for acquiring knowledge. While philosophically Neo-Calvinism was Kantian, its Reformational perspective added a unique dimension. Where the Neo-Kantians postulated only a metaphysical basis for knowledge, the Neo-Calvinists postulated a definite theistic origin. Under the influence of Kuyper, the Neo-Calvinists were able to forge a Christian philosophy and epistemology by paying close attention to the spirit of Kant while ignoring many of the details.

Kuyper's Calvinism provided the rational component of Kant's epistemology in the form of a world view and a set of principles. These components acted upon the world of the senses to form an understanding of the cosmos. Kuyper was interested in forming a philosophy and epistemology that formalized this interaction between religious principles and sense experiences. It is the formulation of a Christian epistemology and philosophy that we now must examine.

KUYPER'S CHRISTIAN PHILOSOPHY

Kuyper attempted what few Protestants before him thought was possible; the formulation of a Christian philosophy based on Reformed principles. Kuyper stated:

In order to come to a philosophy which suits our confession, we must with Calvin continue to insist upon a philosophia christiana , i.e., upon a

philosophy which reckons with God's Word.¹³

Etienne Gilson (1884-1978), prominent Roman Catholic philosopher, observed that the Reformers abandoned philosophy because of the doctrine of the total depravity of man. If humanity was depraved, the Reformers argued, then there was little hope that natural reason could attain to truth, thus the impossibility of philosophy.¹⁴ The Reformers, and their theological descendants, did not create philosophical systems. William Young, Professor of Philosophy at Butler College wrote:

History, moreover, would seem to have verified this conclusion. The Reformers did not work out a system of philosophy. For them the Word of God seems to have satisfied every metaphysical need. Later Protestantism, as we shall see, either fell back into Scholasticism or attached itself to some form of modern humanistic philosophy.¹⁵

Philosophy, in Protestant circles, was either viewed as unnecessary in the pursuit of Christian teachings, or it was viewed as a universal human endeavor. If it was universal, then attachment to a philosophical position by Christians was viewed as essentially harmless to a Christian viewpoint. Kuyper, on the other hand, saw philosophy as essential and

¹³ William Young, Toward a Reformed Philosophy: The Development of a Protestant Philosophy in Dutch Calvinistic Thought since the Time of Abraham Kuyper (Grand Rapids: Piet Hein Publishers, 1952), p. 46.

¹⁴ Ibid., p. 13.

¹⁵ Ibid.

viewed non-Christian, or humanistic philosophy, as harmful to Christianity.

Philosophy was essential to the Christian, Kuyper argued, because philosophy:

Is called to construct the human knowledge, which has been brought to light by all the other sciences, into one architectonic whole, and to show how this building arises from one basis.¹⁶

Philosophy supplied meaning and organization to everything that was known. Therefore, argued Kuyper, if the principles upon which a philosophy was built were not in agreement with the principles expressed in God's Word, the meaning and organization supplied to knowledge would also be at odds with the principles of Scripture. Kuyper expressed this thought when he said,

Philosophy, psychology, aesthetics, jurisprudence, the social sciences, literature and even the medical and natural sciences, each and all of these, when philosophically conceived, go back to principles, and of necessity even the question must be put with much more penetrating seriousness than hitherto, whether the ontological and anthropological principles that reign supreme in the present method of these sciences are in agreement with the principles of Calvinism, or are at variance with their very essence.¹⁷

Kuyper gave full expression to Scriptural principles as

¹⁶ Abraham Kuyper, Principles of Sacred Theology, trans. J. Henrik De Vries (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1954), p. 614. The Principles is actually volume two of a three volume work entitled Encyclopedie der Heilige Godgeleerdheid (Amsterdam: J.A. Wormser, 1894). All quotations in this thesis are taken from the English edition.

¹⁷ Kuyper, Lectures on Calvinism, p. 194.

expressed in the writings of the Reformers. Key principles, such as the sovereignty of God, the doctrines of creation and the fall, and the reality of sin, molded and shaped the epistemology developed by Kuyper. Questions such as, How can knowledge be acquired if humans are depraved? What does depraved mean? Does the grace of God have any effect on rationality? What does it mean "to know" scientifically? were addressed by Kuyper as he struggled to formulate a Christian philosophy.

Two fundamental characteristics of Neo-Calvinist philosophy emerged, the antithesis and principialism. The antithesis, a product of Calvinism, emphasized the reality of two basic, yet opposing, world views. One world view was derived from scriptural principles while the other was derived from non-scriptural, or humanistic, principles. Each camp established its own epistemology, attitudes, and scientific conclusions. Kuyper said:

And the fact that there are two kinds of **people** occasions of necessity the fact of two kinds of human **life** and **consciousness** of life, and of two kinds of **science...** (Emphasis mine)¹⁸

Expressed radically, there were two peoples and two sciences which would ever be locked in mortal combat.

Principialism, an analytical tool used to determine the root principles of philosophies, theories and ideas was a

¹⁸ Kuyper, Principles, p. 154.

product of Kantian thought. It was used by Kuyper to identify into which camp the products of human rationality fell. It consisted of an elaborate justification of the existence of life-principles and the subsequent importance of these life-principles in the shaping of world views, ideas, and actions. If all sense experiences derived meaning from life-principles, then responsible scholarship necessitated careful analysis of these root causes.

The idea of the antithesis was codified by Kuyper and served as the basis of the popular metaphor of two warring camps so popular in Neo-Calvinist circles. It should be emphasized that this metaphor differed essentially from the metaphor of war as expressed by Andrew White and John Draper and accepted by most intellectuals during the first half of the twentieth century. According to White and Draper, science and religion were engaged in an inevitable conflict because religion sought to impede the progress of science. Kuyper, on the other hand, envisioned inevitable conflict between two principal systems. Science and religion were not necessarily locked in combat. In fact, science and religion could be in perfect harmony, Kuyper argued, if they both were derived from the same principal position.

Henry Stob (b. 1908), Professor of Philosophy at Calvin College, provided insight into the Neo-Calvinist idea of the antithesis in his essay entitled Observations on the Concept of the Antithesis.

Guillaume Groen van Prinsterer and Abraham Kuyper popularized the term, but they did not accept its Hegelian connotations. Lifting it out of its correlation with an overarching synthesis, they used it, not in concert with, but against the then regnant idealism. They discerned that this harmonizing monism tended to reduce all contradictions to simple contrarities, to erase all boundaries, and to reconcile all difference. Against it they posited the view that a vast gulf exists between Jerusalem and Athens, and that a commitment to Christ cannot be harmonized with a purely humanistic outlook on life.¹⁹

Kuyper's antithesis was not Hegel's thesis-antithesis-synthesis model of problem-solving. Kuyper's antithesis posited fundamental and permanent separation between the world (Athens) and the Christian (Jerusalem).

The idea of the antithesis has had a long history in Christian thinking. Augustine systematically introduced the idea in his historical analysis found in The City of God. Calvin used the idea of an antithesis in his embryonic formulation of a Christian epistemology based on the principle that humanity was totally depraved. Because of grace bestowed on Christians, he argued, they were endowed with divine knowledge not offered to non-Christians. Therefore, Christians interpreted God's creation in harmony with God while unbelievers were in disharmony with God's will.

¹⁹Henry Stob, "Observations on the Concept of the Antithesis," in Perspectives on the Christian Reformed Church: Studies in Its History, Theology, and Ecumenicity, eds. Peter De Klerk and Richard R. De Ridder (Grand Rapids: Baker Book House, 1983), p. 242.

However, Kuyper in his attempt to solidify the idea of the antithesis, went further than Calvin in establishing this doctrine. He insisted that the antithesis was evident along a demarcation line between the regenerate and the unregenerate. On one side was Truth, on the other was only an appearance of truth. Herman Bavinck (1854-1921), Professor of Dogmatics at the Free University of Amsterdam and close friend of Kuyper, differed with Kuyper on the domain of the antithesis. Jacob Klapwijk, professor of Philosophy at the Free University, summarized Bavinck's objection.

For Bavinck, the kingdom of the truth can no more be equated with those who have been born again than can the kingdom of Satan be equated with those who have not been born again; among the former there is in fact much error present, among the latter much truth.²⁰

As a result, Bavinck was less interested in establishing Christian institutions or insisting on two sciences. He was interested in investigating unregenerate knowledge and "Christianizing" it.

Kuyper, on the other hand, sought to establish "Christian" social and political institution. For it was only through the influence of Christian institutions that truth could be approached. He was directly responsible for establishing newspapers, a political party, elementary and secondary schools, and the Free University of Amsterdam.

²⁰ Jaap Klapwijk, "Rationality in the Dutch Neo-Calvinist Tradition," in Rationality in the Calvinian Tradition, eds. Hendrik Hart, Johan Van Der Hoeven, and Nicholas Wolterstorff (Washington, D.C.: University Press of America, 1983), p. 103.

The rigid antithesis established by Kuyper introduced an epistemological problem greater than that faced by Calvin or Bavinck. What is the Christian to do with the vast amount of knowledge that had been generated by non-Christians? Are Christians to ignore the intellectual treasures of people like Aristotle, Socrates, and Plato? Kuyper recognized this problem and reluctantly included the idea of common grace into his system. Common grace was the grace bestowed on all humanity which restrained the action of sin, thus allowing knowledge to flourish.²¹ This knowledge, while less perfect than that which could be obtained by the Christian, was still true and useful.

Common grace made contact with the world possible.²² Instead of being suspicious of the world and its accomplishments, Kuyper saw the world as a flawed creation of God. To separate the wheat from the tares was seen as the duty of the Christian scholar. Also, common grace made elements of human culture, such as law, politics, and science, means of grace whereby sin was restrained proportional to the amount of Christian involvement in these institutions. Consequently, involvement in the affairs of this world became very important to Kuyper and later to many of the Christian Reformed intelligentsia.

²¹ Wolters, "Dutch Neo-Calvinism," p. 100.

²² Bratt, Dutch Calvinism, pp. 19-21.

The interaction between the antithesis and common grace was not clearly worked out by Kuyper. At times, his writings could be interpreted to mean that non-Christians were incapable of finding truth. In other passages, he implied that discovery of facts, apart from forming conclusions, was a function non-Christians could perform as well as Christians. In yet other passages, the conclusions formed by non-Christians in such areas as the physical science were worthy of consideration by Christians. Klapwijk concluded:

Kuyper took seriously the biblical teaching of the unbridgeable opposition between what the Scriptures call "the domain of darkness" and "the kingdom of God's beloved Son" (Col 1:13), and the possible consequences of this opposition for the realm of science and academic learning....On the other hand one must object to the tangible and massive form in which Kuyper, also in the field of science, delineates the religious antithesis and "separates the thinking minds in the domain of Science into two opposite battle-arrays."²³

Kuyperians within the Christian Reformed Church were divided and confused just as Kuyper had been. Scripture appeared to teach total depravity, but day-to-day observation revealed a great deal of similarity between Christians and non-Christians.²⁴ The obvious tension between antithesis and common grace was a persistent thread running through the

²³ Klapwijk, "Rationality in the Dutch," p. 98.

²⁴ Bratt, Dutch Calvinism, pp. 43-54.

intellectual history of the Christian Reformed Church.²⁵ The antithesis encouraged isolation and separation. The belief that the rationality of non-Christians was incapable of finding substantial truth led Kuyper and others to advocate a separate, and Christian, epistemology. The Free University of Amsterdam, founded in 1880 by Kuyper and others, was begun expressly for the purpose of promoting a Christian epistemology in all scholarly disciplines.

Common grace, on the other hand, kept this Christian epistemology reasonable. Common grace constantly asked of scholarship produced by non-Christians, "What is worth keeping?" It emphasized the fact that the world, human institutions and rationality were creations of God and, therefore, had some redeeming value. The doctrines of the antithesis and common grace constitute the elements of a checks and balance system that alternately allowed rapprochement with the world and separatism. Ethnic homogeneity and the tendency toward isolation kept the Christian Reformed Church from splintering over this issue.

While Kuyper and Bavinck differed on the manifestation of the antithesis and common grace, they were of one mind in

²⁵ Kromminga, Christian Reformed Church, pp. 82-86 gives a brief account of the Common Grace controversies at the 1924 and 1926 Synods. It was shortly after these meetings that the teachings of Rev. H. Danhof and Rev. Hoeksema were condemned because they relied too much on common grace. Bratt, Dutch Calvinism, pp. 187-203 recounts the ferocious verbal duals between the two parties. The battle eventually led to a major reorganization at Calvin Theological Seminary in the 1950's.

believing that a Christian epistemology was essential for a proper understanding of how Christians differed from non-Christians epistemologically. The idea of the antithesis necessitated the development of a Christian epistemology and philosophy. If epistemologies ignored the very foundational principles of rationality, such as, the Creator/creature relationship and the effects of sin, Kuyper and Bavinck argued, then Christians must create an epistemology that does take these principles into account. However, the philosophical framework and justification needed for this new Christian epistemology was not to be found in Kuyper's Calvinism. Ironically, it was Kantian philosophical thought that provided the structure and justification.

Principlialism, or presuppositionalism, was an important philosophical idea to emerge from Kuyper's interpretation of Kant. Principlialism was the belief that "the determinative forces of reality were not external or material but the ultimate commitment of the heart of man, his 'life-principle'"²⁶ These life-principles were so important that they set the standards for a person's rationality. They prescribed a person's logic and were therefore unprovable and impervious to logic.

Kuyper argued that human rationality was not objective and rational, approaching an object entirely free of

²⁶ Bratt, Dutch Calvinism, p. 17.

presuppositions. Rather, humans viewed all objects and events, indeed every experience, through the lens of preconceived ideas. These preconceived ideas constituted what could be called a world view, or the "commitment of the heart". Empiricists, such as the realists, positivists and materialists, held that there was but one correct way of viewing an object, a person's world view had nothing to do with rationality. Kuyper, following in the Kantian tradition, argued that a person's world view had everything to do with human rationality because the ability to know was a complex relationship between the way a subject perceived the world and the objects of perception.

Belief in an a priori transcendental basis to justify and give meaning to the material world and the active participation of the mind in exploration of the material world were important Kantian ideas employed by Kuyper. Neo-Kantians accepted the reality of categories, or a priori concepts, that provided a necessary frame of reference for sense experiences. The world of the senses was formless and without order until the categories in the mind operated on the sense perceptions and through this interaction of mind and object created knowledge. Knowledge, therefore, in the Neo-Kantian epistemology was a product of passive perception and the activity of the mind (categories).

Knowledge was subjective because it was formulated from subjective principles of the mind. This is not the same as

saying knowledge was an opinion. Kantian thinkers were quick to point out that the categories provided stability and surety because they were universal and not particular. But this epistemology raised to prominence the subject of science. The principial basis of a person's knowledge, Kuyper argued, became more important than the accumulation of facts, because the principles shaped facts.

Principialism formalized the antithesis. Principialism formalized the means by which humanity was separated into two camps. Life-principles, Kuyper argued, ultimately fell into two categories; God-glorifying and humanistic. Each camp generated its own philosophies, ideas and theories. Principles determined a person's world-view. The world view acted upon the sense experiences to create philosophies and theories. There could exist, therefore, more than one theory or philosophy because theories and philosophies were constructed from subjective principles and world views.

Antitheticalism and principialism constituted the chief characteristics of Neo-Calvinism. Together, they offered the religious and philosophical justification for a new, Christian epistemology. The idea of the antithesis demonstrated the futility of humanist attempts at rationality. The difference between the regenerate and the unregenerate was not a matter of degree, it was perceived as a matter of kind. While the nature of the antithesis and the role of common grace was hotly debated, there was general agreement that a Christian

epistemology and philosophy had to be created and employed by Christians to combat non-Christian philosophies.

Kantian principialism offered much to a conservative Christian in search of a philosophical structure and justification for a Christian philosophy. It not only challenged the assumptions and conclusions of positivism, determinism, radical idealism and romanticism, it also allowed the introduction of religious principle as a foundations of knowledge. While Kuyper understood the dangers associated with Kant's ideas, Kantianism offered the best philosophical vehicle for the formalization of his ideas.

KUYPER'S IDEA OF SCIENCE

Kuyper's formal discourse on epistemology can be found in his Principles of Sacred Theology which was published in 1894. The Second Division, approximately one-third of the book, contains a lengthy discourse on the "Organism of Science". It is in this division that Kuyper developed his epistemology. A brief discussion of Kuyper's definition and scope of science is in order to aid in understanding why a discussion of science and its role in the establishment of a Christian epistemology was prominently placed in a work on theology.

Science, in the mind of Kuyper, encompassed all attempts to formally understand the cosmos. Kuyper defined science as:

A necessary and ever-continued impulse in the human mind to reflect within itself the cosmos, plastically as to its elements, and to think it through logically as to its relations; always with the understanding

that the human mind is capable of this by reason of its organic affinity to its object.²⁷

Kantian terminology characterized his definition. Science was a product of the relationship between the subject and the object. It was viewed as more than the discovery of facts and their interpretation, but the result of the "organic affinity" between the mind (categories) and "its object". Clearly, his definition of science left no room for the mechanistic and deterministic empiricism of the positivists and materialists.

Science was also more than the "exact sciences." This view of science was consistent with the German conception of science, expressed in the term *Wissenschaft*. A scientific discipline, in the sense of *Wissenschaft*, was any academic discipline that formally sought to know the universe. Therefore, theology, medicine, law, and the arts were all considered by Kuyper to be sciences. The use of the term "organism of science" was an idealistic conception that indicated that all the branches of science must be studied as a whole truly to understand the cosmos. Therefore, he concluded, "the organism of science itself must be clearly outlined, before the place which Theology occupies in it can be determined."²⁸

²⁷ Ibid., p. 88.

²⁸ Ibid., p. 58.

To emphasize one or a few of the sciences while ignoring or denigrating others was harmful. Thus to call the exact sciences the only sciences, as the positivists and materialists were advocating, was a travesty that would lead to excesses and grave errors. Physical science, he feared, would incline "more and more to announce itself as the only true science."²⁹ Also, he believed that the exact sciences were being drawn away from their intended niche in the organism of science to be wrongfully used.

This broad definition of science enabled Kuyper to include the study of theology as a scientific discipline. The organism of science, Kuyper argued, was divided into five disciplines that related, first, to a person's understanding of the "inner or psychial" existence, secondly, an understanding of "outward or somatical" existence. Thirdly, humanity studied the relationships between personal existence and social existence. Fourthly, human life was distinguished from the life of nature. These, Kuyper argued, were divisions in science that are unsought and are in "entire agreement with the needs of practical life."³⁰ But, he continued:

Now the question is whether, along with these four, there remains yet a fifth independent part or organ in the organism of science. And the answer lies at hand, that a final distinction still remains, even

²⁹ Ibid., p. 209.

³⁰ Ibid., p. 212.

the distinction between man and his God. ³¹

These five "organs" of science, all working together as they investigated objects, provided a complete understanding (as complete as humanly possible) of the universe. Theology was as necessary as biology or physics in Kuyper's conception of science.

But, was theology to function as biology, were the facts and methodology similar in both sciences? Kuyper insisted that theology was never to use the methods or facts used by the exact sciences. Theology examined God's revealed Word and as such was grounded in metaphysical and spiritual facts and methodologies. He insisted that the theologian who "loudly" proclaimed "that what he studies is science too, forfeits thereby his right to the honorable name of theologian."³² In fact, to allow theology to mingle with the exact sciences had compelled theologians, Kuyper said:

To cut out the heart of Theology, and to transform it into a department of study which shall fit into the framework of naturalistic science.³³

In making theology a science but separating the objects and methodologies of theology from the other sciences, Kuyper remained true to the spirit of Kantianism. In his Religion

³¹ Ibid.

³² Ibid., p. 211.

³³ Ibid., p. 212.

Within the Limits of Reason Alone, Kant removed knowledge of God from knowledge obtained by rational and empirical means.³⁴ God, being supernatural, could not be apprehended using natural means. However, theology, as the mouthpiece of religion, was free to use rational means to understand the character of God. Apprehension of God was still possible as a **religious experience**, but theology was restricted to the rules of reason.³⁵

Theology, therefore, was a science like any other science. However, since Kant believed that the **a priori** principles of the mind were as important as empirically derived perceptions, he modified the manner in which the sciences functioned. Sciences perceived and organized facts based on the subjective **a priori** principles of the mind. Therefore, theories were rational and reasonable if they followed logically from principles and from a true interpretation of sense experiences. Epistemologically, according to Kant, theology and geology constructed knowledge in a similar manner. Their fact-base may be different, but the reliance on subjective principles to formulate their respective knowledge was the same. Theology was a science, not

³⁴ Immanuel Kant, Religion Within the Limits of Reason Alone (New York: Harper, 1960).

³⁵ Karl Barth, Protestant Thought: From Rousseau to Ritschl, being the Translation of Eleven Chapters of Die Protestantische Theologie, trans. Brian Cozens (New York: Harper Bros., 1959; reprint ed., Newport, New York: Books for Libraries Press, 1971), pp. 150-169.

because it was empirical like the exact sciences, but because all sciences were equally subjective. Kuyper was convinced of the subjectivity of science. This was demonstrated when he argued:

you see different men, who from their point of view are honest in their purposes, and whose talents for investigation are fairly equal, arrive at as many different and sometimes directly opposite results.³⁶

This subjectivity, Kuyper observed, was less prevalent in those areas of science that examined "pure matter" and more obvious in those sciences that investigate the "non-material domain of life."³⁷ However, he believed strongly that the empiricist's claim that knowledge resulted from the accumulation of facts was naive and did not coincide with reality.

Science was subjective because of the complex interaction of the subject (observer) and the object and because of the reality of sin. Here, the synthesis so prevalent in Kuyper's Neo-Calvinism, is seen. The Kantian notion of categories and the Reformational principle of the real effect of sin on rationality are used to justify the proposition that science was subjective.

Kuyper postulated an organic relationship between the subject and object. To understand an object, that is to

³⁶ Kuyper, Principles, p. 116.

³⁷ Ibid.

understand the complex relationship between that object and other objects, required the active participation of the subject's mind. Kuyper said,

In the same way the object must remain unknown to me, even though I am in contact with it by numberless relations, as long as in my consciousness the possibility is not given of apperceiving it in relation to my personal self.³⁸

A little further in the paragraph, he emphasized this point again when he discussed the futility of a color-blind person to understand a painting.

There is, therefore, no perception or observation possible, unless there is a receptivity for the object in our human consciousness, which enables our consciousness to grasp it after its nature and form.³⁹

The active participation of the subject, Kuyper argued, was essential in scientific discoveries.

The Reformational idea of sin was also used by Kuyper to argue for the subjectivity of science. Kuyper argued that taking into account the effects of sin was essential for a correct understanding of the cosmos. He said:

Truly the entire interpretation of science...is in an absolute sense governed by the question whether or no a disturbance has been brought about by sin either in the object or in the subject of science.⁴⁰

Sin affected both the subject and the object and it was only

³⁸ Ibid., p. 71.

³⁹ Ibid.

⁴⁰ Ibid., p. 92.

when this effect was recognized that science could move a little closer to the harmony that existed before the Fall.⁴¹

Obviously, in constructing his Christian epistemology, Kuyper went beyond the standard theological definition of sin. Sin, in Kuyper's thinking, resulted in more than alienation from God. The effects of sin went beyond even the moral and ethical, although these are included in Kuyper's philosophy. Sin reached even into the world of objects and rationality, corrupting the perceptions and observations as well as putting physical constraints on the subject of science. Sin, according to Kuyper, was responsible for mistakes, self-deception, delusion, and bias. And, as long as there was sin, there would be disharmony with the cosmos. This disharmony would result in differing views on the nature of, and relationships between, natural objects.

Science, Kuyper concluded, was an attempt by sinful humans to model reality based on the active participation of the mind. As such, science was subject to the foibles of human nature and the best it could attain was a close approximation to the way the cosmos really works. In this, Kuyper's view of science was in line with many of the philosophies of science introduced since the turn of the twentieth century that

⁴¹ Ibid., p. 90. In this passage Kuyper paints a picture of what life would have been like before the Fall. "...as we ourselves are a part of that cosmos, we should have, with an ever-increasing clearness of consciousness, lived the life of that cosmos along with it, any by our life itself we should have ruled it."

stressed the uncertainty of science and its dependence on societal and psychological perceptions.⁴²

Empiricists have voiced serious apprehension about making knowledge dependent on psychology or society. If knowledge was based on the perceptions of individuals or groups of individuals, the empiricist argued, then knowledge was relative and any attempt at systematizing knowledge was impossible. This argument was used principally by Baconians and Common Sense Realists. Kuyper refuted the claims of the realists by demonstrating that while science was subjective, knowledge obtained from science reflected reality.

Kuyper believed, like Kant, that there was an organic relationship between the subject and object thus ensuring the ability to know. The capability to discover order, continuity and constancy in the cosmos was proof that the inner world of thought was designed to be receptive to see these relations. Kuyper said:

Our thinking does not confine itself exclusively to playing the part of the observer of relations, which

⁴² Karl Popper was a pioneer in moving away from logical positivism and strict empiricism. His notion of falsification involved social and psychological decisions. Karl Popper, The Logic of Scientific Discovery (New York: Basic Books, 1959). Thomas S. Kuhn and Imre Lakatos are both recent philosophers of science who study the structure of scientific theories and the processes whereby one theory or paradigm gives way to another. Thomas S. Kuhn, The Structure of Scientific Revolutions (Chicago: University of Chicago Press, 1962) and Imre Lakatos, "Criticism and the Methodology of Scientific Research Programmes," Proceedings of the Aristotelian Society 69 (1968): 149-186. For an excellent discussion of 'science as a dynamic social system' see Oldroyd, The Arch of Knowledge.

is always more or less passive, but also carries in itself an **active power**. This active power roots in the fact...that before we become aware of these relations outside of use, the setting for them is present in our own consciousness. (Emphasis mine) ⁴³

This relationship ensured that what was observed would not be radically different over time or from person to person.

This relationship was given supernatural surety when he concluded that this organic relationship was a product of a force outside the cosmos. This force he recognized as God, the "Original Subject". When the subject discovered the intricacies of the cosmos, to use the words of Kuyper, he was:

Thinking the thought over again, by which the Subject (God) defined these relations when he called them into being. ⁴⁴

Therefore, God, in Kuyper's epistemology, was the author of the subject (categories), object and the relationships discovered by the subject. Therefore, that which was discovered could be assumed to be reliable, and not relative, because the ability to understand relationships came from God.

Aside from God as the supreme Subject/Creator, wisdom and faith were practical arguments against the realists accusations. Wisdom was that type of thinking, according to

⁴³ Kuyper, Principles, p. 77.

⁴⁴ Ibid., p. 78.

Kuyper, which is practical, intuitive, and in harmony with the reality of the cosmos. Wisdom, Kuyper said:

Is the damning evidence against the skeptics [because it] is a path to knowing other than through the senses and empiricism and through this path knowledge in the cosmos can be derived.⁴⁵

Wisdom was subjective and could never supercede discursive thought, he argued,

Nor can it take the place of empiricism, but it has the general **universal** tendency to exclude follies from the processes of discursive thought, and in empirical investigation to promote the accuracy of our tact. (Emphasis mine)⁴⁶

Kuyper likened wisdom to common sense, the ability to get at the root of the matter and from there use rationalism and empiricism to approach the truth.

Faith, according to Kuyper, was "the means or instrument by which to possess certainty."⁴⁷ Faith allowed the scientist to believe that what the senses were observing was indeed being perceived by the conscience. Wisdom and faith, according to Kuyper, attested to the ability of the subject to understand the reality of the cosmos. Even in the exact sciences, he said:

There is no investigation, nor any conclusion conceivable except in so far as the observation in the investigation and reasoning in the conclusion are

⁴⁵ Ibid., p. 123.

⁴⁶ Ibid., p. 124.

⁴⁷ Ibid., p. 131.

grounded in faith.⁴⁸

Science, Kuyper argued, was not the monolithic monument to objectivity claimed by the empiricists. Science, instead, was a quest for truth which was punctuated by error, false starts, petty biases, and fundamental differences. The results of science were also influenced by the unlimited pattern of perceptions that were carried by each investigator. That knowledge was even possible and progress made was due to the organic affinity of the subject and object that was placed there by God, and by the reliance on faith and wisdom. Science was not truth, science was not even objective. Science only sought truth and was guided by the principles and world views of its practitioners.

All sciences were subjective in that they relied on faith, wisdom, and *a priori* principles. Theological propositions, if allowed to flow rationally from these sources of knowledge, were seen by Kuyper to be as valid as any proposition devised in the exact sciences. Epistemologically, there were no differences between theology and any other science.

From his observation that all sciences were subjective and epistemologically equal, Kuyper proceeded to his final point, namely, that science interpreted in the light of Christian principles was more valid as the science produced

⁴⁸ Ibid.

by materialistic principles. Since interpretations and theories were based on subjective analyses, there could be more than one system of science. In fact, Kuyper claimed there were exactly two systems, the science of the regenerate and the science of the unregenerate. The science of the regenerate assumed Christian principles and from these were developed a philosophy and epistemology that produced certain scientific conclusions. Similarly, the science of the unregenerate assumed certain principles. But these principles were human-centered, and produced a philosophy, epistemology and scientific conclusions that were contrary to those of the regenerate.

Each subject operated from a set of principles, Kuyper argued. There were two fundamental sets of antithetical principles which in turn determined how an individual would structure scientific conclusions. It should be emphasized that normal differences and disagreements between scientists were not the issue here. Kuyper recognized that most differences are the result of poor observation, ignorance of facts and varying degrees of intellectual ability. There was a difference, however, that went far deeper than different abilities or human error. Kuyper wrote:

In this multiformity there operates a law...[that] causes the radically stronger and purer expressions to dominate the weaker....But this naturally all falls away when you encounter a difference of principle, and when you come to deal with two kinds of people, i.e. with those who part company because of a difference which does not find its origin within the circle of

our human consciousness, but outside of it.⁴⁹

There was a fundamental difference, Kuyper maintained, between Christians and non-Christians. And the principles held by each group were expressed in the conclusions of their respective sciences.

Expressed epistemologically, the ability "to know" was in direct proportion to a person's proximity to scriptural principles. If God was the author of all knowledge, then those individuals who come closest to thinking God's thoughts would be closer to apprehending the Truth. The correspondence between God's thoughts and human apprehension of these thoughts was expressed by Kuyper when he said:

He who aims at anything but the study of the organic world of thought that lies in the cosmos, until his own world of thought entirely corresponds to it, is no man of science but a scientific adventurer.
(Emphasis mine)⁵⁰

The philosophy that was grounded in an epistemology that used scriptural principles would produce a science that was qualitatively superior to one that did not use these principles. A Christian epistemology and philosophy was essential if a true account of the cosmos was to be obtained.

Kuyper made great strides in producing a Christian philosophy. His philosophy was a well-reasoned and logical

⁴⁹ Ibid., p. 151-2.

⁵⁰ Ibid., p. 78.

alternative to the idealistic, materialistic and positivistic philosophies of the day. That it was based on principles and a world view that were deemed archaic and useless by most nineteenth and twentieth-century philosophers only reinforced Kuyper's belief in the antithesis and in the validity of his system.

It is understandable that the impact of his philosophical system was minimal. British Calvinists, while perhaps agreeing with Kuyper's world view and Reformational principles, were uncomfortable with his idealism and views on rationality. Other Protestant were uncomfortable with both his Reformational principles and his idealism and epistemology. Secular philosophers could possibly accept his idealism but not his principles. Others have followed in the footsteps of Kuyper and Bavinck, but the philosophical system seems to be limited to Dutch Calvinists.⁵¹

Kuyper's Christian philosophy and views on rationality were destined to remain unpopular. The idea that spiritual rebirth effected rationality was hard to accept, even by other Christians. In democratic America, Kuyper's philosophy collided with the notion of equality. Any endeavor to improve Kuyper's idea of a Christian philosophy was abandoned in

⁵¹ See Wolters, "Dutch Neo-Calvinism"; and Young, Toward a Reformed Philosophy for information on Neo-Calvinists who followed in the footsteps of Kuyper and Bavinck. The list includes Jan Woltjer, W. Geesink, D.H.T. Vollenhoven and Herman Dooyeweerd.

America. No systematic attempt to add to Kuyper's work was evident in America during the first half of the twentieth century. However, there were a number of enduring characteristics of Kuyper's philosophy and epistemology that were used extensively by the Christian Reformed Church.

Principial analysis became an essential tool in the church's arsenal of defense. They were very aware that people did not approach a subject free of preconceived ideas and assumptions. Every statement, observation, and theory was seen as loaded with epistemological baggage. It was, therefore, the responsibility of any thinking person, but especially Christians, to identify the nature of underlying principles. In so doing, a person would be in a better position to know how to respond to philosophies and ideas. There were abuses of principialism and in many cases principial analysis was employed irresponsibly to condemn threatening ideas. But, as James Bratt said, Kuyper's principial analysis demonstrated,

that reason was the servant of the heart; that no intellectual activity, including the natural sciences, was impartial or value-free or without presuppositions; and that every social organization operated according to and in the interests of an ideology - and this in an age when such contentions were consistently ignored or denied.⁵²

Closely related to principialism was the idea of the antithesis. The idea of the antithesis motivated the

⁵² Bratt, Dutch Calvinism, p. 18.

denomination for Christian action but also was responsible for much stereotypical thinking. It was responsible for the creation of Kuyper's Christian epistemology and his interest in founding social, political and academic institutions. Later, in America, the antithesis was a driving force in the establishment of Christian day-schools and Calvin College. These institutions and accompanying epistemology were necessary to rescue lost souls and assist in the redemption of the cosmos. Unfortunately, not all the effects of the antithesis were this noble. Often the antithesis became an excuse for lazy thinking. Issues were often seen as black and white, good or evil. However, few, if any, of the leaders discussed in the next chapter used the antithesis in this fashion.

Kuyper's discourse on the nature of science and the place of theology in the sciences made an impact on the leadership in the Christian Reformed Church. The issue of the epistemological equality of theology and the exact sciences was used frequently by churchmen. The relationship between theology and science was worked out to a very great extent by Kuyper. It remains to be seen what the Christian Reformed Church did with Kuyper's philosophy and epistemology.

III. THE COMPLEMENTARY MODEL

Kuyper's philosophy and supporting epistemology were closely followed by members of the Christian Reformed Church. There was much written during the period from 1900 to 1930 about the antithesis, principles, common grace, and the unity of truth. However, there was very little interest during this period in continuing Kuyper's work of systematizing a Christian philosophy. The church's intelligentsia for the most part was content to simply interpret their situation in light of what Kuyper had written. As the model of interaction between science and theology is discussed, it will become evident that the church leaders were followers and not innovators.

During these turbulent decades, when American denominations struggled with the ever-changing role and importance of theology and science, the Christian Reformed Church remained relatively free of this conflict. There was not the fear of science, or worse, the anti-intellectualism so often displayed in fundamentalist circles. There were no schisms or major confrontations in the college and seminary over the issue of evolution or science. Conservative theological thinking remained dominant and unopposed. Theology became neither reactionary nor conciliatory toward science. Conspicuously lacking during this period were the debates

about the importance and function of theology and science so prevalent in other American denominations.

A conclusion that could be drawn is that the denomination was not interested in science and ignored its influence or importance. This conclusion would be erroneous because the denomination held science and the study of nature in high esteem. Nature was regarded as God's creation. To study nature was to investigate the handiwork of God. Nature, gave insight into the character of God.¹ There were, between the years 1900 and 1930, no fewer than eighteen articles in the various publications of the denomination that dealt directly with the issue of science, nature or evolution.² Creation and the issues that surrounded this doctrine were prominent topics in the Christian Reformed Church. Characteristic of most of these articles was the irenic and reasonable manner in which these topics were discussed. What is lacking is the strident rhetoric and accusatory manner of other conservative Christians during this period. An example of this

¹ There were many essays during this period that discussed the importance of creation. See Peter G. Berkhout, "Nature and Scripture," Calvin College Chimes, March 1918, pp. 98-101; Peter G. Berkhout, "Nature and the Student," Calvin College Chimes, April 1918, pp. 138-141; D.H. Muyskens, "Restatement of Doctrine," The Banner, November 14, 1924, p. 725; Cornelius Van Til, "The Education of Man - A divinely Ordained Need," paper presented at the Educational Convention of The National Union of Christian Schools, 26 and 27 August 1930, pp. 25-49; and Menno Bosma, Exposition of Reformed Doctrine (Grand Rapids: Sevensma, 1907), pp. 62-73.

² Refer to the bibliography for a complete listing.

reasonableness can be found in the only full-length article written by a member of the Christian Reformed Church on the 1925 Scopes Trial. Samuel Volbeda (1881-1953), Professor of Church History at Calvin Theological Seminary, concluded that the law prohibiting the teaching of evolution was inappropriate because it was designed to establish a Christian state. This response was quite different from those advanced by other conservative Christians, such as William J. Bryan.³

The Christian Reformed model of interaction between science and theology can be characterized by the term complementary. While the idea of giving praise and proper respect is the common meaning of the word complementary, the idea of completeness is the intended meaning in this thesis.⁴ The notion of being complementary connotes a harmonious working together of independent entities to complete a whole. It entails that the parts function properly only when the sum of the parts is formed. They respected and praised each other, but, more importantly, they worked harmoniously toward the goal of obtaining Truth. In Christian Reformed thinking Truth was formed only when theology and science, and all other disciplines, worked together to form a more complete picture of the cosmos. Kuyper's idealism as expressed in his organism

³ Samuel Volbeda, "The Scopes Trial," Reformed Herald, pp. 23-26.

⁴ Complement comes from the Latin *complire*, to complete.

of science pervaded this model with its emphasis on Unity and Truth.⁵

John B. Schoolland wrote an essay entitled Science and Religion - Complementary. Schoolland was neither a professor nor a member of the clergy. However, his essay captured the essence of the early Christian Reformed complementary model.⁶ The essay was written in 1935, after the heyday of Kuyperian influence. Although Kuyper was mentioned only once, the article represented a condensation of Kuyperian thought and also identified key elements in the complementary model of interaction between science and theology.

Schoolland began by arguing for the rationality of both theological and scientific truths. He criticized the popular nineteenth-century interpretation that knowledge was divided into two areas, rational and irrational. This division implied that subjective knowledge, i.e., religious knowledge, was inferior to scientific knowledge. The common understanding of the relationship between religious beliefs and scientific knowledge, as understood by Schoolland, was that religious factors

May be a potent and legitimate factor in the privacy of your own thinking, [but] the only **rational** basis of

⁵ Science in this chapter, unless otherwise indicated, is made up of those disciplines normally associated with the word science in the twentieth century. Kuyper's idea of science as all formal attempts to understand the cosmos (*Wissenschaft*) seems to have been abandoned in the migration to America.

⁶ John Schoolland, "Science and Religion - Complementary," Calvin Forum, October 1935, pp. 67-9.

expression involves opinions you might reasonably be expected to entertain on the commonly accepted ground of science. (Emphasis mine)⁷

The implication was that theological opinions, (they could hardly be called truths), while helpful on a personal level, did not have the same epistemological weight as scientific discoveries. They were not reasonable and certainly not scientific.

But, he countered, religious truths are rational because "God reveals himself in a two-fold manner: indirectly and mediately through Nature, and directly and immediately through Scripture". Our desire, he added, is to make "both our religious and our scientific views reasonable and understandable not only, but harmonious as well." He went on to say, "we have a dualism...two aspects of Truth, not separate and distinct, least of all antithetical, but complementary and interrelated."⁸ Theology was to be considered a "co-discoverer of Truth" and not the harmless cogitation of theologians.⁹

Theology and science were two aspects of Truth; one without the other was considered intellectual suicide. Theological propositions were to be heeded and "science and

⁷Ibid., p. 67.

⁸Ibid.

⁹Ibid., p. 68.

Religion must be brought into clearer harmony and synthesized into one whole."¹⁰ There should be, then, nothing but the highest regard for both science and theology. Since they represented "two aspects of Truth" and were to be kept separated, there should exist, Schoolland insisted, a balance between the study of these two disciplines. He said:

Young students should be taught to seek truth wherever it may be found, whether it be in the field of science or of revealed religion. To train carefully in either, and fail to prepare for the other, is to court disaster, in one-sidedness, compartmentalism, intellectual dishonesty, and confusion."

While science may use empirical methods for obtaining knowledge and theology may rely more on rational methods and may appear more subjective, Schoolland emphasized that both were important in discovering Truth.

A second characteristic of the complementary model was that science and theology were to function in relative isolation from each other. Schoolland said, "Each has its own aim and its own field for investigation...[and] its own metaphysics."¹² This was an important characteristic in the Christian Reformed model because neither science nor theology required the other for verification of conclusions and the progress of neither was impeded by the other. This was made clear when he said:

¹⁰Ibid., p. 67.

¹¹Ibid., p. 69.

¹²Ibid., p. 68.

Science and religion both represent dynamic, progressively developing concepts. Embodying, as they do, the two aspects of Truth, their development must run concurrently, mutually complementing and illuminating one another. It is both incorrect and dangerous to regard them as developing parallel with one another - it implies too rigid an independence, a source of false antithesis. Neither should be thought of as in a complete stage of development.¹³

Science had the entire realm of creation to investigate while theology had the revealed Word of God. The objects of study, underlying assumptions, and methodologies were different in each area. Both disciplines, he argued, in order to complement each other, must have the freedom to develop without constraints imposed by the other.

The third, and last, characteristic of the complementary model exhibited in Schoolland's essay was the identification of life-principles as the means for achieving the complementary relationship between science and theology. These principles were variously described by Schoolland as the "true essentials", the "critical concepts", and "the frontier - along the line where science and religion seem to deviate." These phrases are synonymous with the "life-principles" of Kuyper. Unity and completeness could only be found when science and theology both were derived from the same principles.

As expressed by Kuyper, and accepted by Schoolland, a scientific conclusion could not complement theological truths if the corresponding principles were antithetical. That is why

¹³ Ibid., p. 67.

Schoolland could have such confidence in scientific facts.

Facts were not to be feared, he argued:

But their pre-mature, incomplete, or erroneous interpretation that is perverse of religious - or even scientific - truth. Interpretation requires philosophic and religious scrutiny and synthesis.¹⁴

If it appeared that scientific facts opposed theological propositions, he argued, it was only because the interpretation were based on principles and world views that were opposed to Christian principles. So, disharmony could exist between science and theology but it was not because of conflict among facts but because of opposing principles and world views.

Schoolland encouraged unqualified study of nature because he was confident that "there can be no danger or harm in facts" and that perfect harmony ideally existed between the two branches of Truth.¹⁵ Conservative Protestant churchmen were not so confident. Conservative Presbyterians and fundamentalists were perceived as living in constant fear that one day science would uncover a fact that would conclusively prove the theory of evolution.¹⁶ In their philosophical

¹⁴Ibid., p. 68.

¹⁵Ibid.

¹⁶ Cornelius Van Til remarked about this undue reliance on facts when he said, "The fight on this sector of the front is sometimes waged in such a manner as though the issue could be settled at this place alone and once for all. So also men sometimes fight about the trustworthiness of the Scripture as though the next move of someone's spade in Palestine could determine everything." "The Education of Man - A Divinely

thinking, facts could mortally wound Christianity. On the other hand, Schoolland was confident that science could not be hostile to theology because "true science and true religion are complementary."¹⁷ This statement appears to be naive, but Schoolland was operating under the philosophical assumption that principles, not facts, determined the degree of harmony.

Science and theology, in the complementary model, were viewed as rational, essential and interrelated co-discoverers of Truth. But the philosophical road to this conclusion was long and winding. If the underlying principles used to interpret the facts in both fields were essentially similar and if each discipline carefully examined its own field of investigation and honored the investigations of the other, then there could be harmony.

There are, then, three areas of Neo-Calvinist epistemology that must be examined. First, the justification for, and importance of, the claim that theological truths were rational and epistemologically equivalent to scientific truths. Secondly, the justification for, and the importance of, the strict separation of disciplines. And, finally, the principal justification for the complementary model, which can also be expressed negatively as the principal explanation

Ordained Need," paper presented at the Educational Convention of the National Union of Christian Schools, Holland, Michigan, 27 and 28 August 1930, p. 28.

¹⁷ Schoolland, "Science and Religion," p. 69.

for disharmony between science and theology.

EPISTEMOLOGICAL EQUALITY

The primary characteristic of the Christian Reformed model was the belief in the epistemological equality of theological and scientific propositions. Without equality the church's scholars realized that science and theology could not be complementary. In fact, without epistemological equality the entire superstructure of Kuyper's Christian philosophy would crumble. The only other option would be the duality of knowledge expressed in the nineteenth-century rational/irrational dichotomy.

Due to the influence of Kant, as has been demonstrated, contemporary thinkers believed that theological propositions were based on faith and not demonstrable by use of reason and were valuable only in so far as they regulated ethical and moral living. To the Christian Reformed thinker this was unacceptable. In the words of Henry Stob this thinking implied that "a man must cut himself asunder and posit an antithesis within himself."¹⁸ This antithesis involved the artificial separation of faith and reason and it "denied all theoretical expression other than that involved in value judgments [to theology], and that science is denied the wide and absolute

¹⁸ Henry Stob, "Some Antitheses in Life," paper presented at the Educational Theories and Practices Convention of The National Union of Christian Schools, Paterson, New Jersey, Fall 1939, p. 78.

perspective of religion."¹⁹ Faith and Reason, Stob argued, were not antithetical but were key elements in the quest for knowledge and Truth.

Underlying all rationality were Kuyper's life-principles which provided the foundation for all ideas and actions. How one did science was as much an outcome of this foundation as how one did theology. The test for rationality, in Neo-Calvinist philosophy, was not whether a claim could be proved empirically, but whether a proposition followed logically from a world view. For example, given that a person accepted the principle that God existed, the theological claims that God created the universe, that Scripture is the Word of God, and that sin has severely damaged the rationality of humanity were rational statements. These claims, or the principles upon which they rested, could not be considered irrational or merely existential. They were propositions that reflected reality as perceived from the world view established from Christian principles. They were a reflection of reality just as the theories of the atom, of relativity and of heredity reflected reality.

The antithesis about which Stob so urgently warned his fellow Christians was the antithesis that broke asunder Truth. Being heavily influenced by idealism the church leaders tended to think in terms of a corpus of ideal truth that represented

¹⁹ Ibid., p. 77-8.

all the knowledge of the universe. Whereas in most idealistic systems this Truth was found in an impersonal Other, in Kuyperian thought Truth was God. Stob expressed this "Christianized" idealism when he contrasted God with other "Interpretive Principles".

He is greater than the "Being" of Parmenides, the "Nous" of Anaxagoras, the "Ideas" of Plato, the "One" of Plotinus, the "Substance" of Spinoza, the "Universal Ego" of Fichte, or the "Absolute Spirit" of Hegel.²⁰

Each discipline provided one piece of the puzzle. To state that theological truths were inferior to scientific truths was to the Christian Reformed scholar the same thing as stating there were two corpora of Truth. Stob stressed the importance of epistemological unity between faith and reason by closing his argument with:

One thing would seem to be quite certain: that we cannot and may not insulate our scientific moods from our religious attitudes. We cannot with impunity compartmentalize our lives. We may not introduce the kind of antithesis that separates the student in us from the Christian, so destroying our essential unity.²¹

Faith was not inferior to reason, it was simply another avenue that led to Truth. Unity as expressed in Kuyper's organism of science and the ideal of Truth were the primary motives for arguing for epistemological equality for science and theology.

Others in the Kuyperian tradition also argued for the essential unity of Truth. Schoolland, as was demonstrated,

²⁰ Ibid., p. 84.

²¹ Ibid., p. 81.

saw science and religion as two aspects of Truth. They were not, however, separate and distinct, resulting in compartmentalization.²² Clarence Bouma (1891-1962), Professor of Dogmatics at Calvin Theological Seminary, in speaking against the "Kantian dualism" that made theological knowledge inferior, said:

In our proposed propaganda we should be fundamental and hammer away at the impossibility, the utter futility of thus divorcing religious knowledge from scientific knowledge. We should protest against this attempt to treat the mind of the child as composed of a number of watertight compartments. We should make clear that, though the religious and the "scientific" outlook are not identical, they must form a unity.²³

By stating that religious knowledge and scientific knowledge were not identical but, yet, did form a unity, Bouma was emphasizing the Kuyperian equality of both types of knowledge. The Christian Reformed leaders did not attempt to demonstrate that theological knowledge was equal to scientific knowledge because it was derived from empirical methodology. Liberal theologians and conservative Presbyterian theologians, to gain more respect for theology, took this route. Rather, they argued that scientific propositions were formulated in a fashion fundamentally identical to the formulation of theological propositions. The science of the positivists and materialists, the church's leaders insisted, was based on the

²² Schoolland, "Science and Religion," p. 67.

²³ Clarence Bouma, "Propagating Christian Education," paper presented at the Educational Convention of The National Union of Christian Schools, 26 August 1925, pp. 111-12.

same subjectivity and faith that were identified as the reasons for the inferiority of theological knowledge.

It was characteristic of the Christian Reformed method of apologetics that it challenged the commonplace of the opposition. It was not content to accept the equality of theology and science based on methodological similarities. Instead, Christian Reformed intellectuals argued that scientific and theological knowledge were equal because scientific knowledge was epistemologically identical to theological knowledge.

Kuyper emphasized the fact that all knowledge was derived from the interaction of the subjective principles of the individual and sense experiences. This interaction implied that the acquisition of all knowledge was the same and that all knowledge was subjective. Christian Reformed intellectuals used principlism to drive home the idea that knowledge was defined by the principles a person holds. Cornelius Van Til (1895-1988), Professor of Apologetics at Westminster Theological Seminary and staunch Antithetical Kuyperian, emphasized this when he said:

Before a single step can be taken in the direction of searching for facts, a scientist must first decide whether he will undertake his investigation in a theistic or in an anti-theistic spirit.²⁴

²⁴ Cornelius Van Til, "Our Attitude Toward Evolution," The Banner, December 11, 1931, p. 1115.

Clarence Bouma spoke of the fact that scholars "cannot help thinking in terms of some world and life view."²⁵ In concert with Kant's revolution in epistemology, Christian Reformed scholars believed scientific knowledge was a product of subjective rationalism and empirical observation.

To further demonstrate the dependence of science on non-empirical knowledge, the leadership agreed with Kuyper that faith enabled humanity to acquire knowledge divorced of empirical methods. Kuyper had made it clear that the scientist just as much as the theologian depended on faith and wisdom to formulate propositions. Peter G. Berkhout, a medical doctor who wrote extensively about the interaction between science and religion in Christian Reformed publications during the 1920's, had this to say about faith.

But the Christian believes in still a fifth means whereby man may obtain knowledge. That fifth organ of knowledge is faith. This is a kind of intuitive knowledge.²⁶

After assuring the reader that this faith is different from "saving faith", he continued:

It is stated then that the scientist too lives by faith in the last analysis.²⁷

²⁵ Clarence Bouma, "Calvinism and Constructive Scholarship," Calvin Forum, February 1940, p. 135-37.

²⁶ Peter Berkhout, "The Conflict Between Science and Religion," The Young Calvinist, July/August 1928, p. 184.

²⁷ Ibid.

The belief in the Unity and Absoluteness of Truth, the emphasis on subjective, yet rational, principles as the foundation for knowledge and the idea that faith was necessary for knowledge, convinced Christian Reformed intellectuals that scientific knowledge was not superior to theological knowledge. They rejected any attempt to give to theological knowledge an inferior role in formulating philosophies, theories or interpretations.

Rather, science was brought down from its lofty position held by the realists, materialists and positivists. While the Kantian dualism between natural and supernatural knowledge was maintained, church leaders refused to acknowledge any difference between theological and scientific knowledge. Science took its place along with all the other disciplines dedicated to furthering knowledge. The natural sciences and theology were seen as complementary parts of the whole. Each was important for the discoveries it added to the total and accumulated knowledge of God's creation.

The emphasis on Kantian terminology and thought, in part, accounted for the weakening impact of the Kuyperian system in Christian Reformed circles after 1930. Removed from the seedbed of rationalism and idealism and transplanted in the soil of empirical America, the old leaders were not able to maintain the philosophical roots and vitality so necessary for such a system. British empiricism, always so strong in America and especially in conservative Presbyterian groups, was a

force that pulled many Christian Reformed leaders, born in America and intent on becoming "American," into its sphere of influence.

SPHERE SOVEREIGNTY

While the idealistic notion of the unity of Truth and the Kantian idea of subjectivity allowed for the possibility of epistemological equality between science and theology, what functionally kept one from dominating the other? Since religion and theology played a vital and essential role in all aspects of life in the Christian Reformed Church, it is important to understand how the temptation to make science a tool of theology was avoided. It is also important to understand how the leadership avoided the great temptation of this period to view science as the source of all answers for humanity's problems.

Schoolland was aware of the dangers of an unbalanced relationship between science and religion. He said:

As we look about us we usually find either Science or Religion in the saddle....Either the inspired Word or the conclusions of physical Science is accepted as the major criterion for Truth. And where either predominates the other is apt to be neglected or even despised.²⁸

Throughout history, Schoolland observed, one or the other tended to dominate. When that happened, the unity of Truth was destroyed and error and deception crept in. The idea of "sphere sovereignty" will be important as we investigate how

²⁸ Schoolland, "Science and Religion," p. 68.

the church's intelligentsia was able to maintain a balanced perspective needed for their complementary model.

Kuyper originally developed sphere sovereignty as a political theory, but it was used by Christian Reformed intellectuals to regulate the expansion of intellectual disciplines as well.²⁹ Sphere sovereignty was the idea that God ordained spheres of authority which were independent of each other. Science, politics, theology and every other area of human knowledge had authority over its respective facts and theories. However, there was to be coordination between these areas as they searched for knowledge and each sphere was responsible to God for carrying out God's directives. Conflict, error, and deception arose when one sphere attempted to dominate the others or when a sphere ceased to submit to the directives of God. Kuyper's Lectures on Calvinism expounds in great detail how the various spheres, such as religion, politics, science and the arts, were to operate within their spheres and as a whole.³⁰ Hermann Bavinck also strongly endorsed the idea when he said:

In searching after these causes the eminent conception of evolution, as a working hypothesis, has done eminent service....but here the mistake has been made...natural science remains, therefore, perfectly free in its own

²⁹ Irving Hexham, "Christian Politics according to Abraham Kuyper," Cruix 19 (March 1983), pp. 2-7; and James Skillen and Stanley Carlson-Thies, "Religion and Political Developments in Nineteenth Century Holland," Publius 12 (1982), pp. 43-64.

³⁰ Kuyper's Lectures on Calvinism began with an overview of his "life-system" then each successive chapter dealt with how Calvinism effected religion, politics, science and art.

sphere; but it is not the only science, and must therefore cease striving to construe religious and ethical phenomena after the same physico-chemical and methematico-mechanical fashion as is warranted and required in the case of numberless natural phenomena. (Emphasis mine)³¹

As was pointed out in the discussion on the unity of Truth, the intelligentsia never viewed science and theology as identical, only equal. Clarence Bouma said, for example:

We should make clear that, though the religious and the "scientific" outlook are not identical, they must form a unity.³²

They were seen as serving different ends, investigating different facts and using different methodologies. Science served to help humanity understand God's natural revelation while theology sought to understand God's special revelation. Kuyper, as was shown, only had contempt for those theologians who attempted to raise the prestige of theology by adopting empirical methods. Schoolland also wrote:

True science and true religion are complementary. Science heeds the injunction to 'have dominion over the earth and subdue it'. Religion aims at the 'thoroughly furnished man of God'. To the degree that one succeeds in bring about harmonious integration of these two aims there can no longer be any thought of 'scientific vs. personal opinion', or of a 'compartmental mind'.³³

³¹ Herman Bavinck, The Philosophy of Revelation (London: Longmans, Green, and Co., 1909; reprint ed., Grand Rapids: Baker Book House, 1979), p. 86.

³² Bouma, "Propagating," p. 111-12.

³³ Schoolland, "Science and Religion," p. 69.

Science and theology each had different tasks to perform. Acquisition of knowledge and progress toward truth were proportional to the amount of independence granted each. The result would be a unified picture of reality, not the fragmented view that was perceived as dominant in American thinking.

Theology would be in error if it questioned the theories of relativity, of the structure of the atom, or of natural selection. As long as the scientific theory remained in the sphere reserved for science, the conclusions were off-limits to theology. Similarly, the church's intellectuals argued that science could not pass judgement on such theological proposition as the sovereignty of God, the existence of God, the reality of sin, or the reality of heaven and hell. These were matters that could only be decided by theologians since spiritual conclusions could not be drawn from natural facts.

Christian Reformed thinkers found it unthinkable to use theological propositions to support scientific theories. They viewed, for example, the natural theology of Presbyterians as an intellectually dangerous position. The principle danger, laid out by Schoolland, was the increase of prestige for science and the corresponding denigration of theology. A situation which was recognized as not conducive to complementary thinking. He said:

It must be admitted that scientific criteria gain added prestige and power, whether it be through criticism or through substantiation [of theology]. Religion seems increasingly lacking in self-confidence, the ability to

stand on its own feet. Science, on the other hand, because of its greater assumed independence, does not share in this feeling, and seeks no corroboration outside of itself.³⁴

Schoolland concluded that science was always the winner if definite boundaries were not established. As such, Christian Reformed thinkers viewed natural theology as highly suspect. They saw it as a definite blurring of boundaries that would only increase the possibility of error and confusion.

Sphere sovereignty was especially beneficial to the pursuit of science. Scientists could roam freely in the natural world, free to discover any fact about the universe. Since all creation was from the hand of God, there was unity and harmony and the church did not have to fear what science might find. Since theology and science were separate, independent and equal, neither required the support of the other to validate its truth claims. Neither discipline need attempt to dominate. While there was considerable dialogue and even modification of propositions on both sides, the dividing line between the two disciplines was rarely blurred.

PRINCIPALISM

The Kantian notion that all human rationality was subjective provided the philosophical justification for equality between the sciences and theology. Sphere sovereignty prevented one from dominating the other and provided a means for free expression and independent progress for both. It now

³⁴ Schoolland, "Science and Religion," p. 68.

remains to investigate the justification for harmony and unity between science and theology and also to explain the reality of conflict between the two. Equality does not necessarily entail that science and theology will be complementary. Christian Reformed scholars believed that science and theology were complementary only when they operated from the same life-principles. Conversely, disharmony and conflict resulted when they operated from conflicting life-principles. The conflict was not between science and theology, per se, but between principles and world views.

Berkhout, in his article The Conflict Between Science and Religion, asked if there was conflict between science and religion. His answer is illustrative of what has been said regarding the unity of truth and the importance of principles.

Now as to the question whether there is such a conflict, it can be answered by "no" and "yes". Ideally considered there can be no conflict between the two. God is the Creator of our wonderful universe, and the study and appreciation of the universe in all its aspects should never interfere with man's religion...But through sin everything has been marred, and so too the relation between science and religion has been disrupted. And as certainly as there is no conflict between religion and science in the ideal sense, so just as decidedly is there a conflict in the practical sense.³⁵

Ideally, since God created everything, there should be no conflict between science and theology. Yet, sin has disrupted this ideal situation. Rationality was functioning abnormally.

³⁵ Berkhout, "Conflict," pp. 161-62.

The doctrine of creation was essential to the epistemology of the Christian Reformed Church. It was more than a theological doctrine, it was basic to their concept of rationality. Van Til associated the doctrine of creation with a correct view of education and culture when he said:

The creation idea, when seen to be the presupposition of the covenant idea, brings out the distinctiveness of the **Reformed** view of education....But they [Christians who believe in creation] see no need of fighting for the creation concept in order to assure a foundation for a genuine Christian culture.³⁶

The doctrine of creation taught that the ability to reason was a creation of God. God also created the relationships between facts, as well as the facts themselves. God also placed in each person the ability to recognize these relationships. Absolute Truth was approached by those who could best understand the "thoughts of God" that had been implanted in humanity.

The doctrine of the fall recognized that the harmony between various parts of Truth that was established by God was irretrievably destroyed. The principle of Unity, sought after by every idealist philosopher, was found by Christian Reformed intellectuals to be inherent in the Creator/Creature dichotomy. But this relationship was now imperfect and, therefore, humanity's ability to understand the cosmos was imperfect. Ideally, there was to be harmony between science

³⁶ Van Til, "Education of Man," p. 25.

and theology. This harmony was to result in perfect understanding of Truth. However, because of sin, principles and world views were not in harmony with the "thoughts of God" and error and disharmony were the results.

The effects of sin were very real in the Neo-Calvinist epistemology. Like Kuyper, Christian Reformed scholars argued that sin not only resulted in spiritual separation from God, it also affected humanity's ability to understand creation. Dietrich Kromminga (1879-1947), Professor of Historical Theology at Calvin Theological Seminary, in an article which was an exposition of Romans 8:19-22, discussed the results of the fallen nature of humanity.

Grant that man has fallen, and it must follow that the power of interpretation and the power of control has slipped from his hands. And the history of natural science is a copious illustration of the unstableness of man's interpretation of nature....³⁷

The fall established the religious antithesis and from the antithesis resulted two fundamentally opposing views regarding creation. Berkhout emphasized the relationship between sin and antitheticalism when he said:

But it is a tremendously important principle of Calvinism, that creation is no longer normal, but thru the fall of Adam has become abnormal. This is one of the fundamental differences between our view of Nature and that of others, for example, of evolutionists.³⁸

³⁷ Dietrich Kromminga, "Nature's Expectation, or, the Christian View of Nature," Religion and Culture 1 (February 1920): 14.

³⁸ Berkhout, "Nature and Scripture," p. 99.

Kromminga also emphasized the abnormality of the present status of creation when he said:

For not only does it [the Bible] know of orders of nature differing from the present, but, as we saw, it declares the present order to be neither original nor ultimate. In fact, it calls the present state of nature abnormal and unnatural.³⁹

Some chose, they observed, to ignore the reality of creation, the effects of sin and ultimately the existence of God. From this position, the antithesis was established. On one side were the normalists who saw no beginning or end of the universe and who only saw natural mechanisms at work. On the other were the abnormalists who saw God at work and the effects of sin on rationality. Each position was established upon a set of principles.

Kromminga illustrated the conflict between the two world views when he commented on the existence of two views of nature. The one view, in harmony with Scripture, sought to understand nature in light of man. The second view sought to understand man in light of nature. He concluded:

It is no wonder especially, that the great antithesis between the regenerate and the unregenerate, which by God's grace is made to run through the human race results also in two antithetical views of nature.⁴⁰

³⁹ Kromminga, "Nature's Expectation," p. 5.

⁴⁰ Ibid., p. 12.

Whether a church leader was Kuyperian or Bavinckian, the assumption that life-principles determined how an individual interpreted the world was universal. Henry Schultze (1893-1959), Professor of New Testament at Calvin Theological Seminary and later President of Calvin College, while referring to the particular life-principles accepted by the Christian Reformed Church, was making a statement on the universality of life-principles when he said:

We are a biased people. We might as well candidly admit it. An unbiased, a purely objective examination of the subject-matter at hand [evolution] is for us quite impossible....It [the Word of God] is the truth and everything absolutely incompatible with it is untruth. That's our bias.⁴¹

Schultze implied that the claims made by positivists and realists that a scientist could be completely objective and unbiased when observing nature were false. Not only were they false, but they pointed to a bias. By claiming they had no biases, they made a statement as to the nature of their bias and underlying principles.

The doctrines of creation and the fall were benchmarks in determining which side of the antithesis a person was on. Principles, or world view, determined whether a person accepted or rejected these ideas. It did not surprise the Christian Reformed intellectuals that the most ardent supporters of evolutionism were vehemently opposed to the

⁴¹ Henry Schultze, "Our Attitude Toward the Theory of Evolution," Reformed Herald, May 1926, p. 188.

ideas of creation and the reality of sin.⁴² Opposition to the ideas of creation and sin was not derived from scientific facts, churchmen argued, but was a natural outgrowth of the principles upon which normalists constructed their evolutionism.

Life-principles were an essential component in any analysis of the cosmos. Accumulation of facts was of course needed to begin to understand the universe, but the life-principles were responsible for generating knowledge. Van Til argued that the world view of the scientist was more important than the accumulation of facts when he wrote:

Similarly before a single step can be taken in the direction of searching for facts a scientist must first decide whether he will undertake his investigation in a theistic or in an antitheistic spirit. Before the specialist talks "facts" to us we insist on talking philosophy to him.⁴³

Conclusions and theories were not the results of facts only. While facts were obviously necessary to interpret nature correctly, they were molded by the "spirit", or world view, of the scientist.

⁴² Evolutionism can be defined as those philosophical and theological positions that built systems of thought and ideas around a loose interpretation of the scientific theory of evolution. Very often, they incorporated religious, even Christian, terminology and symbols but reinterpreted them along naturalistic lines. For example, Herbert Spencer's Social Darwinism, John Fiske's Synthetic Philosophy and Auguste Comte's naturalistic religion are examples of evolutionism. See Moore, Post-Darwinian Controversies, pp. 217-251 for more examples of evolutionism.

⁴³ Van Til, "Our Attitude," p. 1115.

Facts held only a supportive position in the Christian Reformed epistemology. Facts were seen as pawns in the struggle between world views. Van Til stated:

Our apologetic can, accordingly, afford to use no time for details....Facts, to be sure, are stubborn things, but facts must be interpreted. The philosophy assumed by evolutionists is a far more dangerous thing than the evidence that they bring....So also with the so-called facts of psychology and anthropology that have a bearing upon education. These facts, too, must be interpreted. And interpreted they are. Now all facts are interpreted in either of two ways. Men are either Theists or Anti-Theists. The whole battle about facts is a mad scramble between these two kinds of philosophers.⁴⁴

Facts were considered supportive because they could not exist on their own. In keeping with Kuyper's interpretation of Kantian thought, facts had meaning only in relation to a priori principles that gave meaning to facts.

Appealing to facts alone to justify a proposition was viewed by Christian Reformed intellectuals as inconclusive and intellectually dangerous. Opposing sides, they argued, simply choose those facts that support their views and ignore the others. This reliance on fact as the sole arbitrator of disagreement was seen as the root cause of all the -isms of the world. Stob points out the futility of relying on facts when he said:

The result is a constant recurrence of rival 'isms'. Let one take one's stand on Thought and Feeling will put in its word; the rationalist makes the mystic vocal. Choose to interpret things in terms of physics and biology will protest; vitalism lives by mechanism and vice versa. Exhalt

⁴⁴ Van Til, "Education of Man," pp. 28-9.

[sic] Mind and Things will obtrude; be an idealist and the realist has a *raison d'être*.⁴⁵

The existence of "raw facts" was a philosophical impossibility in the Kuyperian system. Every theory was based on interpreted facts that were viewed from the perspective of a world view and every world view was either theistic or anti-theistic. Kromminga observed:

We both [the theist and anti-theist] read into nature [read facts] what we will; the one what by faith he has learned from the Word of his God, the other what his unbelief has gleaned from man's heart and life apart from God. Which one of the two interpretations the individual chooses, depends entirely upon his attitude to God.⁴⁶

Disharmony and disunity were removed from any discussion of facts and identified as a result of warring world views. There did not exist somewhere facts that contradicted other facts. Belief in the unity of creation would not allow that admission. If fundamental conflict arose, principial analyses was employed to discover the root cause for disharmony. Facts were considered value-neutral and could be divorced from a world view and used in the service of God. Jacob Klapwijk, Professor of Philosophy at the Free University of Amsterdam, expressed this view when he commented on the problem of using the contributions of "non-Christian thinkers."

⁴⁵ Stob, "Some Antitheses," p. 73-4.

⁴⁶ Kromminga, "Nature's Expectation," p. 12.

I may gratefully acknowledge their gifts, God's gifts. Yet I must always extract their insights from the ideological connections present in them....⁴⁷

Stob had this to say about the "gifts" that could be gleaned from the various systems of thought devised by human reasoning.

It [the antithesis] will enable us, for example, to do justice to the partial and distorted truths of pragmatism and behaviourism without either committing ourselves to the errors in these systems or high-handedly condemning the systems as a whole;...This will also mean, of course, that we shall be able to give due consideration to the legitimate insights of Idealism without succumbing to its deceptive charms.⁴⁸

The separation of fact from its interpretive world view allowed for free and unrestrained exploration of creation. Acceptance of the fact that the earth was older than 6,000 years did not mean a person had to accept the anti-theistic implications that went with that fact. The implications that Scripture was fallible and that God did not create the universe were derived from an anti-theistic world view not from the scientific fact. A Christian could, they argued, accept the old age of the earth and with a theistic world view construct another interpretation.

Implied in this supportive role of facts was the possibility of a plurality of logical and rational views. If facts were used to support world views, then it was possible

⁴⁷ Klapwijk, "Dutch Neo-Calvinist Tradition," p. 109.

⁴⁸ Stob, "Some Antitheses," p. 76.

to have two opposing conclusions based on identical facts. Kromminga's discussion of the relationship between humanity and nature serves to illustrate this point. It is clear, he wrote, that science has shown that humanity and nature are inextricably interwoven.

Somehow man fits exactly into nature and nature is the stage for human history; and therefore one's view of nature, whatever it may be, will call for a corresponding view of man; and in the same manner, whatever one's view of man may be, it clamors for a view of nature that is in agreement with it.⁴⁹

Yet from these facts two opposing systems of thought developed. The one system, based on a Christian world view, viewed "nature in the light of man." The other system of thought, based on unscriptural views, understood man in relation to nature.⁵⁰ Both systems were logically sound and rational in that they appear to "square with the facts of nature."⁵¹ Kuyper's notion of two sciences was reflected in this conclusion. Both systems, because the facts were consistently interpreted in accordance with their accompanying world views, were intellectually acceptable. But only one was closest to reality, that one which was closest to reflecting God's thoughts.

⁴⁹ Kromminga, "Nature's Expectations," p. 4.

⁵⁰ Ibid., p. 5.

⁵¹ Ibid., p. 12.

The urgency to develop a Christian philosophy is apparent in this idea of plurality. Christians needed a system of thought that interpreted the facts of nature from a Christian perspective. The attractiveness of evolution was so compelling, they argued, because it followed logically from anti-theistic principles. It was an entirely self-contained system of thought. Those that accepted evolutionism accepted it because it agreed with their principles, not necessarily because it was factually compelling. If Christians developed a Christian philosophy, the facts of nature would be interpreted to present a world created, governed, and sustained by God.

Principlialism provided the explanation of why there was both harmony and disharmony between science and theology. It removed the source of conflict from the disciplines themselves and placed it in the practitioners. Science and theology were not enemies or even rivals. There was no source of conflict between the facts of science and the facts of theology. The root cause of conflict was sin which resulted in the antithesis. Humans were on one side or the other of the antithesis and adopted the accompanying principles and world views. Science and theology could be complementary or they could be bitter enemies.

The complementary model can best be illustrated by the position taken by the Christian Reformed Church on the theory of evolution. The church officially never condemned the

scientific facts or conclusions of the theory. However, its leaders consistently questioned speculative conclusions and condemned the philosophical view of evolutionism derived from the scientific theory. The leaders of the church consciously practiced the idea of sphere sovereignty while at the same time judiciously applying principial analysis to the conclusions derived from the facts of evolution.

THE COMPLEMENTARY MODEL AND EVOLUTION

The boundaries established for the study of evolution were found in the creeds of the church and in the proclamation that Genesis 1 and 2 were historical. Article 12 of the Belgic Confession stated:

We believe that the Father by the Word, that is, by His Son, has created of nothing the heaven, the earth, and all creatures, when it seemed good unto him, giving unto every creature its being, shape, form and several offices to serve its Creator.⁵²

Article 14 also declared:

God created man out of the dust of the earth, and made and formed him after His own image and likeness.⁵³

Clearly, the creeds taught that God created everything out of nothing and humanity was a special creation.

⁵² "The Belgic Confession" in Psalter Hymnal, Doctrinal Standards and Liturgy of the Christian Reformed Church (Grand Rapids: Publication Committee of the Christian Reformed Church, 1934), p. 7.

⁵³ Ibid., p. 8.

Also, the Synod of the Christian Reformed Church during the 1950's and 1960's, when petitioned to make an official pronouncement on evolution, refused to do so. The position taken at the 1951 Synod, the first time the topic of evolution had reached this highest governing body of the denomination, set the tone for future discussions. The decisions and thinking were also consistent with Kuyperian thought of earlier decades. The committee designated to investigate this petition concluded:

Synod has refrained from intimating what concept of evolution would be acceptable. Synod has merely directed the attention of the Churches to the fact that acceptance of the 'historicity of the revelation in Gen. 1 and 2 implies that a Reformed scientific researcher should observe the fact that Divine creation should be the starting-point of scientific investigation. Whether and to what extent in the development of what had been created God has made use of evolutionary processes, is for the believing researcher to establish.⁵⁴

The committee report also emphasized the possible violation of the principle of sphere sovereignty when it stated:

Generally, because it has to preach the Word of God, which is not a scientific treatise and which should not be bound to any particular exegetical exposition, the Church should observe the utmost discretion in making all kinds of pronouncements in connection with scientific matters.⁵⁵

⁵⁴ Christian Reformed Church, Acts of Synod, 1951 of the Christian Reformed Church (Grand Rapids: Christian Reformed Publishing House, 1951), p. 58.

⁵⁵ Ibid., p.61.

The implication of this report was that a scientist was free to develop any theory that did not violate the boundaries established by Reformed principles as expressed in the creeds of the church.

Within these limitations the church leaders were willing to accept much of the scientific conclusions of the evolutionists. In 1907, M. J. Bosma (1874-1912), a respected theologian within the church, said "we thankfully acknowledge the great work the advocates of evolution have done in extending our knowledge of nature."⁵⁶ In 1920, Kromminga conceded much to the evolutionist's science when he said:

Not only in grouping animals, plants, and inanimate objects together are the Bible and Modern Science at one, they agree also in relating this totality of nature most intimately to man. Both recognize the fact that man on his physical side comes up out of nature and belongs to nature.⁵⁷

He was even more forthright, claiming that some form of evolution does take place.

The present state of things in nature is expressedly conceived of as lasting for some length of time.... And thus the biblical view of nature has room for all the facts which our scientists may discover about nature in her present condition.⁵⁸

⁵⁶ M.J. Bosma, "Evolution and Why We Reject It," The Banner December 12, 1907, p. 607.

⁵⁷ Kromminga, "Nature's Expectation," p. 4.

⁵⁸ Ibid., p. 5.

Others were equally open about the validity of scientific evidence for evolution. John Van Haitisma (1884-1965), Professor of Chemistry at Calvin College, said in 1913:

The object of this article is not to deny that there is continuity in variation, certainly not within the limits of species. Nor do we believe that it is good science to assert dogmatically that the Creator does not, and can not, employ some kind of evolutionary process for bringing about many changes in the organic world.⁵⁹

Finally, Hessel Bouma (1884-1971) wrote:

I do not deny the possibility that there may be a certain truth in the evolutionary theory as to the development and relation of the species, the age of the world, and other points. It may be necessary sometimes to reconsider the popular exegesis of some parts of Scripture that seem to be hostile to any form of an evolutionary way of working by our God.⁶⁰

Of the numerous writers who commented on evolution during the years between 1900 and 1930, very few vilified the science of the evolutionary scientist. Schultze even chided the fundamentalists for their unfair and vicious tactics.⁶¹ For the most part, scientific conclusions were accepted.

All these writers praised evolutionary discoveries with the clear proviso that they were only praising science. If the conclusions were products of good science, that is within the

⁵⁹ John P. Van Haitisma, "Three Kinds of Evidence for Evolution," The Banner, August 14, 1913, p. 513.

⁶⁰ Hessel Bouma, "Evolution and Creation," Religion and Culture 5 (September 1923): 83.

⁶¹ Schultze, "Our Attitude," p. 173.

sphere of science, they were worthy of consideration. The strict separation of scientific conclusion from philosophical conclusion was a product of principial thinking. The facts, they argued, were value-neutral in relation to the principles used to interpret those them.

However, these scholars were quick to condemn the various strains of philosophical evolutionism that were derived from evolutionary facts. These were condemned for two reasons. First, philosophical evolutionism was based on principles that were antithetical to the Christian world view. Secondly, philosophical evolutionism originated outside the sphere established for science. The various forms of evolutionism were generally ethical, social or religious systems and lacked sufficient proof because they were non-scientific systems that were constructed by using scientific evidence.

When Schultze made the statement "Our God cannot be the God of the evolutionist," he was not referring to the evolutionist as scientist but the evolutionist as philosopher/theologian.⁶² He went on to explain that the god of the philosopher of evolutionism was a deistic or pantheistic god. Further, the views of man, sin and regeneration envisioned by this philosopher could not be those held by Christians. Affirming the idea of the antithesis, he

⁶² Ibid., p. 188.

concluded, "acceptance of either means the rejection of the other."⁶³

Berkhout clearly delineated scientific conclusion from philosophical and theological conclusions in his article entitled The Conflict between Science and Religion. After criticizing the fundamentalists for attacking the scientific conclusions of evolution, he said:

But it seems to me that Christians should wage war against the mechanistic and materialist type of Evolution, or against materialistic monism as such.⁶⁴

In a different article, Berkhout again made a similar plea.

We are sure that it is because of these great truths, the facts of evolution, that it has such a grip upon the people. We see the tremendous dangers connected with the teaching and application of the principles of the evolutionary world-view....But at the same time we are not afraid to assimilate the good that there is in evolution, or the good that it may have produced.⁶⁵

These statements are particularly important because they were made after 1925, the year of the Scopes trial and the years of extreme polarization in conservative Christianity. Tension in theologically conservative groups was high at this time. Deference to evolution, no matter how slight, was generally viewed as defection from orthodoxy. To allow such

⁶³ Ibid., p. 188-90.

⁶⁴ Berkhout, "Conflict," p. 55.

⁶⁵ Peter G. Berkhout, "The Study of Heredity, A Contribution of Evolution to the Reformed Doctrine of Original Sin," Young Calvinist, April 1926, p. 123.

conciliatory statements to appear in official publications and to have little outcry, attests to the universal understanding of the subtleties of the Kuyperian distinction between facts and principles. Secondly, these articles appeared in The Young Calvinist, a publication written for the youth of the church. Confidence in the complementary nature of science and theology was high to allow impressionable minds access to the subtleties of Kuyperian arguments.

When the evolutionists began making theological or metaphysical claims based on scientific facts, the Christian Reformed leaders condemned these on the grounds that they violated the principle of sphere sovereignty and that they were based on antithetical principles. However, they were willing to accept scientific statements, even if they pointed to evolutionary mechanisms in nature.

CONCLUSION

Religious principles established the foundation and boundaries for science and theology. Principles such as God exists, God created, or humanity is sinful were beyond the reach of reason but were responsible for the direction taken in all theory construction in the Christian Reformed Church. In this they were true Calvinists, religious thought dominated and controlled every aspect of life. Their outlook on life was very similar to that of the seventeenth-century Reformers.

But along with this Calvinistic approach to life, contemporary thought pervaded Christian Reformed thought. Kant had desacralized human rationality by removing the supernatural beyond the realm of reason, what remained were legitimate areas of human investigation. Kuyper insisted that theology was one of those areas of investigation and that epistemologically theology was identical to the exact sciences. Leadership in the Christian Reformed Church accepted this notion of equality. Theology was a science just as Chemistry was a science. However, what had changed was the definition of science. The Kantian notion that all sciences were subjective and dependent on faith brought the exact sciences to the same position as theology. What was left for the two but to cooperate and complement each other?

But the Calvinist belief that religious principles governed and shaped theory construction did not mesh with the desacralized system introduced by Kant. Kantian thought also left open the possibility that the supernatural could be reintroduced into the realm of reason through the *a priori* principles that governed rationality. It was at this point of contact between the natural and the supernatural that Kuyper created his Neo-Calvinism. Religious principles governed the theory construction in science and theology. Kuyper reinterpreted Calvin by updating Calvinism to include Kantian psychology and idealism.

Science and theology were viewed as equal partners in the human quest for formal knowledge. If there was fundamental conflict it was not necessarily because of faulty reasoning, insufficient facts, poor observation, or theology attempting to obstruct scientific progress, but because of a difference in fundamental principles. Principal analyses became essential for discovering the origin of theories and ideas. Church leaders assumed that if differences arose between science and theology that were determined not to be of a principal nature, the conflict could be resolved using reasonable means. Therefore, science and theology within the Christian Reformed Church worked harmoniously together because the principles held by practitioners in both areas were assumed to be identical.

A critical but healthy dialogue characterized the interaction between science and theology in the Christian Reformed Church. They were viewed as rational, independent components in the quest for truth. Faith in the complementary nature of science and theology was deep and unshakable. Underlying this idea of completeness was the equally unshakable belief that God was the originator of this unity.

IV. OTHER MODELS IN AMERICAN RELIGIOUS THOUGHT

The theory of evolution generated another era of crisis in western culture. The rise of modern science, and particularly Newtonian physics, caused the first modern debate over God's role in nature. Since Newton's science explained how, and presumably why, natural objects behaved as they did, the emerging materialists and deists questioned the need of a sustaining and sovereign God. In the second half of the nineteenth century, in light of the evolutionary theories that offered explanations for the diversity of life, the origin of human nature, and the origin of the psyche and social organizations, the last reasons for believing in a personal God were removed. To those radical enough to think out loud, a God of any sort had become unnecessary.

However, a careful examination of this period reveals that most intellectuals in Protestant America continued to struggle with the relationship between God and nature. James Moore, in his work The Post-Darwinian Controversies, outlined the personal struggles of many intellectuals who sacrificed careers and personal happiness to obtain compromises that were personally and intellectually honest.¹ Evolution prevented easy answers or satisfying solutions. With its accompanying ideas of process, randomness, selection and speculation, its

¹Moore, Post-Darwinian Controversies, pp. 102-122.

adherents had to break with long-standing traditions that emphasized fixity, certainty and divine intervention. The decision to categorically and without hesitation remove God and theological propositions from the intellectual arena may have come easy for some, but a majority continued to struggle with the role of God in an evolutionary age. This chapter explores three prevalent models that dealt with the interaction between science and theology. The questions to be addressed are, first, What did the adherents of these models do with God and theology as they encountered the new evolutionary view of nature? And, secondly, How did their responses compare to the Kuyperian model of interaction between science and theology?

Three broadly defined groups of thinkers pondered the relationship between theology and science during the years after Darwin: modernists, theological liberals and traditionalists. The modernists were the smallest group and diametrically opposed to the traditionalists.² Spokesmen for modernism included Haeckel, Spencer, and George Matheson (1842-1906) in Europe, and Minot Judson Savage (1841-1918)

² The term modernist, or modernism, usually connotes liberalism in general. This definition of modernism was used by Kuyper in chapter 2. In this chapter a modernist will be defined as one who glorifies, or deifies, the Darwinian process of evolution and tends toward pantheism.

and John Fiske (1842-1901) in America.³ Members of this group were materialists or naturalists who accepted as rational and useful only that knowledge gained from the senses. All other knowledge - moral, ethical, religious and aesthetic - if not apprehended by scientific means, was irrational and meaningless. God was usually identified as a process or force in nature. The process of Darwinian evolution formed the foundation for all their thinking.

The largest group consisted of the theological liberals. Liberalism was "intermediate between traditionalism and modernism," Ian Barbour historian of science and religion explained, because:

It agreed with modernism in welcoming scientific knowledge of evolution, but held that modernism had departed too far from classical views of God and man.⁴

Liberals maintained that indeed there was a relationship between God and nature, but the focus of theology and its role had to be redefined in light of science and modern thought.

³Ernst Haeckel, The Riddle of the Universe at the Close of the Nineteenth Century (New York: Harper & Brothers Publishers, 1901); Herbert Spencer, A System of Synthetic Philosophy. 10 vols. (London: Williams & Norgate, 1862-1896); George Matheson, Can the Old Faith Live with the New?, or, The Problem of Evolution and Revelation (Edinburgh: William Blackwood & Sons, 1885); Minot Judson Savage, The Religion of Evolution (Boston: Lockwood, Brooks & Co., 1876); and John Fiske, The Destiny of Man Viewed in the Light of His Origin (Boston: Houghton, Mifflin & Co., 1884).

⁴Barbour, Issues, p. 104.

The theology of the traditionalists, the liberals maintained, was not suitable for a modern, scientific age.

The traditionalists were mainly moderate and conservative Presbyterians and the tradition they sought to maintain was natural theology which embodied conservative Calvinism and British empiricism.⁵ Early fundamentalism should be considered part of traditionalism because many adherents came out of Presbyterianism and used British empirical thinking extensively.⁶ The truth and validity of theological propositions, they believed, could be derived from an unbiased examination of scientific facts and the use of common sense reasoning. This group was generally critical of evolution and its methodology.

MODERNISTS

The concept of God was seen by the modernists as a hinderance to the progress of humanity. For example, Auguste Comte (1798-1857), French philosopher and father of positivism, saw humanity progressing through three stages, the second being the religious stage after which humanity progressed to the final stage of scientific thinking.⁷ Those who remained in the second stage were seen as ignorant or

⁵Hovenkamp, Science and Religion, pp. 22-56.

⁶Sandeen, Roots of Fundamentalism, pp. 103-131; and Marsden, Fundamentalism, pp. 11-39, 102-23.

⁷Stanislav Andreski, ed., The Essential Comte: Selected from Cours de Philosophie Positiv, trans. M. Clarke (New York: Barnes and Noble, 1974).

obscurantists. The superstitions of religion were seen as impeding the progress of science. Sensual experience provided the only useful facts, and science alone was capable of building knowledge from these facts. Since there was no identifiable god in the modernist's system, there were no theologians. Philosophers and scientists dealt with the religious, moral and ethical implications of modernism.

Generally, the modernists were not without a religious system, but it was completely derived from scientific investigations of nature. As Barbour explained, modernists identified God as:

An impersonal force.... In effect they 'deified' the evolutionary process, making it the means of grace and the source of progress. Human dignity, which had been threatened by man's animal ancestry, was restored by making man the forefront of an inevitable cosmic advance to yet higher levels.⁸

The modernist view of God was pantheistic. The concept of God had meaning only in relation to mechanical processes. As Haeckel wrote in his very popular account of modernist beliefs:

When we pass over the finer shades and the variegated clothing of the God-idea and confine our attention to its chief element, we can distribute all the different presentations of it in two groups - the theistic and pantheistic group. The latter is closely connected with the monistic, or rational, view of things, and the former is associated with dualism and mysticism.⁹

⁸ Barbour, Science and Religion, p. 7.

⁹ Ernst Haeckel, The Riddle of the Universe at the Close of the Nineteenth Century (New York: Harper & Brothers Publishers, 1901), p. 276.

The pantheistic "God-idea" was considered much more rational and more in keeping with the thoughts and sentiments of an "age of science."

Clearly, the modernist view of the role of God represented an extreme position in American thought during the years after Darwin and was certainly at the opposite end of the spectrum in regard to Kuyperian thought. Kuyper's system posited a transcendent God and emphasized the value of theological thinking in the grand scheme of rationality. Kuyper had nothing but contempt for the modernist's philosophical system, believing that their philosophies represented all that was evil and decadent in Christian culture.¹⁰

Kuyper feared modernism more than any other contemporary system of thought because it was so appealing. He aimed much of his rhetorical and persuasive efforts at this opponent. It's appeal, he argued, came from the principles and world view that supported modernism. These principles gave new life to the natural tendencies of humanity to throw off the yoke of theism, but until the development of evolutionism unregenerate humanity did not have the means of doing so.

¹⁰Abraham Kuyper, Evolution, trans. E.R. Post (Amsterdam: Hovekhar and Wormser, 1899), pp. 4-9. This was a speech delivered at the Free University of Amsterdam. It is perhaps the clearest exposition on the theory of evolution delivered by Kuyper.

Kuyper wrote:

They languished spiritually in the diaspora of their Ignorabimus. But thanks be to the theory of Evolution they have now also come into possession of one all-inclusive system, of a world-and-life-view deduced from one principle....Our adversaries are no longer baffled by any of these questions [i.e. the origin of the soul], and enthused by their new discovery most of them look down even with pity if not with conceit upon anyone who still clings to the old standpoint of Christianity.¹¹

In other words, the modernists developed a world view, a philosophy and a science logically constructed from one basic and appealing anti-theistic principle.

This new independence offered to proponents of anti-theism was severely criticized by Kuyper in his 1899 lecture on evolution delivered at the Free University. It is not coincidental that it was written shortly after Haeckel's Riddle of the Universe.¹² In this lecture, Kuyper offered a systematic critique of modernism using the tools of analysis he used so well - principialism and antitheticalism. Kuyper systematically listed many of the famous contemporary modernists and critically analyzed their views.

The radical rejection of traditional concepts of God by the modernists and their close philosophical proximity to the Neo-Calvinists accounted for, in part, the radical nature of Kuyper's epistemology. When Kuyper posited the separation of

¹¹ Kuyper, Evolution, pp. 2-3.

¹² Haeckel or his philosophy were mentioned no fewer than twenty-five times in less than 45 pages.

humanity into two very real camps, he frequently used modernists as illustrations. Haeckel, as was mentioned earlier became the straw man in many of Kuyper's arguments. He demonstrated, for example, that Haeckel established his system not because of compelling scientific facts but because of previously held, anti-theistic principles. Due to the rational, yet insidious nature of modernism, it appears Kuyper felt justified in using extremes to drive home his point.

The only similarity between Kuyper's system and the modernist's was philosophical kinship. Like Kuyper, modernists developed a system of thought that emanated from one unifying ideal. In the case of Haeckel, the atom provided the basis for his monistic ideal. He believed that the current universe could be explained and understood entirely in light of the chemico-physical make-up of the atom. Everything, from the structure of wood to the emotion of hate, could ultimately be understood in the composition of the atom. Kuyper, too, accepted the general idea of a unifying ideal, except that his was the transcendent God of traditional Christianity. Kuyper's ideal was supernatural while modernism's was natural. The modernist and the Neo-Calvinists began from a similar philosophical base, but arrived at radically different systems of thought. This dichotomy provided evidence for Kuyper's belief that principles, not facts, drove rationality and that humanity was divided into two antithetical camps.

Solutions to the problem of the relationship between science and theology were much more subtle and diverse among the liberal theologians. Like the modernists, liberal theologians accepted the high status ascribed to science. But, they rejected the modernist's naturalistic interpretation of humanity for a view that postulated a significant and important spiritual dimension in humanity.¹³ Theology was the study of this spiritual dimension. A harmonious relationship between science and theology was envisioned by liberal theologians. The nature of this harmonious relationship and how it contrasts with the complementary model of the Christian Reformed Church will be investigated.

On the surface, the complementary model and the model of liberal theologians appeared similar. Conflict between science and theology was rare in both models, unlike in the modernist and traditionalist models. However, upon close examination, harmony existed in liberal thinking to the degree that theology paralleled and gave deference to science. There was not the idea of being complementary in the liberal model of interaction between science and theology. Theological propositions were redefined and were not considered epistemologically equal to scientific propositions. Theology received status and honor to the degree that it adopted the

¹³Frederick Gregory, "The Impact of Darwinian Evolution on Protestant Theology in the Nineteenth Century," in God and Nature, eds. Lindberg and Numbers, pp. 378-383.

methodology and assumptions of science.

Liberal theology retained the terminology of traditional Christianity but redefined it in relation to its new focus - humanity. Kant had removed knowledge of a transcendent God from rationality, so liberal theology studied the effects of God on humanity. Liberal theology studied an immanent God, a God who was apprehended and known only in relation to humanity. God was not transcendent and did not interject himself into history. Therefore, liberal theology rejected traditional Christian dogma, such as the deity of Christ, miracles and the divine inspiration of Scriptures. Salvation was seen within the context of the evolutionary progress. Christ became an ideal that was analyzed and dissected and used as a model of humanity triumphing over its baser nature.

While it was defined by human reason and scientific knowledge, nevertheless, liberal theology reaffirmed the strength of the spirit over nature. As humanity continued to seek that which was honorable, good and moral by discovering the "godness" within, it would rise above its animal nature and usher in the "Kingdom of God" on earth. Human experience, not divine revelation, became the means of knowing God.

Theological propositions only had validity and meaning in relation to scientific or rational explanations. This attests to the epistemological inequality of scientific and theological propositions in the liberal model. Theology dealt with spiritual matters which could not be apprehended in

isolation. To speak of sin as a rupture between God and man was meaningless. But to speak of sin as an "Inhumanity [that] has fortified itself in the institutions of trade, society, politics, and religion," gave the concept meaning and impetus for social and institutional reform.¹⁴ Theological propositions, while important in defining the strengths and weaknesses of humanity, were nevertheless epistemologically inferior to scientific propositions.

Theology was viewed as broadly conforming to empirical and rational methods because it limited itself to human experience.¹⁵ The rise of biblical scholarship illustrated liberal willingness to conform to "scientific" standards. The books of Moses, for example, were analyzed linguistically and historically. The gospel accounts of Jesus were questioned based on contextual and historical methods. Comparative religion became a popular academic discipline and the lives of biblical figures were carefully scrutinized with the latest psychological and sociological tools. The focus of this scientific theology was to understand the spiritual drive in humanity. Jesus, Scripture and biblical characters were important because they exhibited the spiritual qualities necessary for humanity to progress to a higher plane. Yet,

¹⁴ George Gordon quoted in William R. Hutchison, The Modernist Impulse in American Protestantism (Cambridge, Mass.: Harvard University Press, 1976), p. 191.

¹⁵ Ibid., pp. 87-94.

scientific methodology and evolutionary assumptions provided the key necessary for releasing those qualities.

Evolutionary thinking, with its ever-present emphasis on progress, was seen as a natural ally of liberal theology. The theory of evolution was rapidly and wholeheartedly embraced by liberals. However, they preferred the more gentle Lamarckian evolution over the Darwinian evolution favored by the modernists. Lamarckian evolution emphasized an "innate power" (*pouvoir de la vie*) that produced organisms of increasing complexity and perfection. It also stressed an "inner disposition" that assured the continuity of changes produced by the environment. (This is the famous idea that environmentally induced changes in the physiology of an animal can be inherited).¹⁶ The idea of inner and innate forces meshed well with the liberal concept of an immanent God. Therefore, evolutionary theories regarding society, psychology, and history were rapidly absorbed into liberal theology. In the final analysis, since liberal theology rejected a transcendent God, insisted on analyzing Scripture "scientifically," and used many of the scientific conclusions of evolutionary science, it was methodologically similar to science. Science set the boundaries for theological investigation and provided the analytical tools. God was defined by nature but unlike the modernist, the liberals believed God to be separate from

¹⁶ Moore, Post-Darwinian Controversies, pp. 142-43.

nature.

While generalizations are dangerous when dealing with such a diverse group as the liberal theologians, the model of interaction between science and theology can be characterized by harmony at the expense of theology's independence and equality. Theology removed its focus from a transcendent God to humanity's "godness". Theology accepted the epistemological superiority of scientific knowledge and the methodology and evolutionary assumptions of science. Theology and science were not seen as equal partners, their relationship was not complementary. Theology and science were harmonious to the degree that theology was willing to accept the leadership of science.

TRADITIONALISTS

The third major group of intellectuals to deal with the problem of the relationship between theology and science were the traditionalists. They were most like the Kuyperians in their acceptance of conservative, Calvinist theology. They accepted the transcendence of God and the reality of miracles. Scripture was also believed to be divinely inspired and the basis for all of life. However, the greatest difference between the traditionalists and the Christian Reformed intellectuals occurred in the area of epistemology, specifically, what was considered to be the foundation of knowledge.

The Old Princeton, or Princeton Theology, school of thought characterized the traditionalists.¹⁷ Composed primarily of Presbyterians, such as Charles Hodge (1797-1878), Archibald Alexander (1772-1851), Benjamin B. Warfield (1851-1921) and J. Gresham Machen (1881-1937), the traditionalists represented the prominent thinking of nineteenth-century America. The Old Princeton tradition emphasized confessional and doctrinal Presbyterianism and employed the Common Sense Realism of Thomas Reid and the empirical scientific methods of Francis Bacon. The philosophical and scientific components of this tradition ensured the dominance of a strong empirical and realist outlook on the universe.

The Reidian school of thought was based on classical foundationalism. Foundationalism postulated that a sure structure for knowledge could only be based on a foundation of indubitable certitudes. D. Z. Phillips, in his recent book which compares the Kuyperian and foundationalist epistemic systems, defined foundationalism as:

The view that propositions are of two kinds, those which stand in need of evidence, and those which provide the required evidence. The latter are said to

¹⁷ See John C. Vander Stelt, Philosophy and Scripture: A Study in Old Princeton and Westminster Theology (Marlton, N.J.: Mack Publishing Co., 1978); Bozeman, Protestants in an Age of Science, pp. 32-43; and Mark Noll, ed., The Princeton Theology 1812-1921: Scripture, Science, and Theological Method from Archibald Alexander to Benjamin Warfield (Grand Rapids: Baker Book House, 1983) for more information on this school of thought.

be foundational, since they do not stand in need of further evidence.¹⁸

As with most philosophical system that stressed realism and empiricism, Reid was interested in establishing a basis for certainty to combat philosophical skepticism.¹⁹

It is important to note that Reid, and the Old Princeton theologians and philosophers, did not put the existence of God in the class of foundational principles, unlike Kuyper and his followers. Instead, it was generally asserted that by going from foundational principles, which were considered scientifically rational, one could prove that God existed. If "there are, in fact, the clearest marks of design and wisdom in the world of nature", argued Reid, then it must be concluded that there was a wise and intelligent cause.²⁰ This appeal to design characterized the major writings of nineteenth-century Presbyterian writers and was the embodiment of natural theology and the "argument from design."

The existence of God was something that had to be demonstrated. The proposition was not a foundational principle

¹⁸ D. Z. Phillips, Faith After Foundationalism (London: Routledge, 1988), p. xiii. Phillips actually refers to the Kuyperian system of thought as "Reformed", but the representatives he used were chiefly Neo-Calvinists.

¹⁹ Alan H. Goldman, Empirical Knowledge (Berkeley: University of California Press, 1988), pp. 1-15.

²⁰ Thomas Reid, Essays on the Intellectual Powers of Man, ed. Baruch A. Brody (Cambridge, Mass.: M.I.T Press, 1969), VI:6, pp. 667-69 quoted in Marsden, "The Collapse of American Evangelical Academia," p. 227.

because it could not be classed as a non-inferential certitude. Since it was not foundational, it had to be proved using rational arguments or it would be condemned as an irrational statement. God, while understood by the traditionalists as being transcendent and infinite, was made accessible by using finite reason. This was the crux of Presbyterian apologetics and natural theology.

Presbyterian apologetics and natural theology assumed that reasonable proof of God and his characteristics could be derived from a rational analysis of nature. William Paley's imminently popular book Natural Theology (1802) and the large Bridgewater Treatises attested to the popularity of this view of the relationship between God and nature.²¹ Mark Hopkins (1802-1887), Professor of Moral Philosophy and president of William College, stated confidently that "If God has made a revelation in one mode, it must coincide with what he has revealed in another."²² Assuming that nature could reveal something of God, he went on with an argument from analogy.

There is a harmony of adaptation and also of analogy.
The key is adapted to the lock; the fin of the fish

²¹ William Paley, Natural theology: or, Evidences of the Existence and Attributes of the Deity, 12th ed. (London: Printed for J. Faulder, 1809); The Bridgewater Treatises were commissioned in 1825 by the last will and testament of the 8th Earl of Bridgewater, Francis Henry Egerton, to show "the Power, Wisdom, and Goodness of God as Manifested in Creation." D.L. LeMahieu, The Mind of William Paley: A Philosopher and His Age (Lincoln, NE: University of Nebraska Press, 1976), p. 173.

²² Mark Hopkins, Evidences of Christianity (Boston: T.R. Marvin & Sons, 1880), p. 97.

is analogous to the wing of the bird. Christianity, as I hope to show, is adapted to man; it is analogous to the other manifestations which God has made of himself.²³

Natural theology assumed that by amassing facts in a Baconian fashion and by applying rational thought shaped by common sense foundational principles, one would be compelled to accept the reality of God's character. In a very real sense, natural theology postulated that knowledge of God was subservient to human rationalism.

Natural theology functioned well in America until the general intellectual community began to question the certitude of the traditionalist's foundational principles. George Marsden, in his essay entitled The Collapse of American Evangelical Academia, provided an excellent account of this erosion of unity. The principles held by the traditionalists were challenged directly by the principles of the evolutionary modernists, positivists and materialists. By the turn of the century, very few of the traditionalist's principles survived among the intelligentsia as common sense propositions. Even such basic ideas as truth, objectivity of facts, and an orderly and intelligible universe were replaced by such principles as evolutionary process, subjectivity and uncertainty. As a result, Marsden concluded, evangelical academia suffered a major setback in the early decades of the

²³ Ibid., p. 75.

twentieth century because the foundation upon which its entire epistemological house was built lost credibility.²⁴ But more importantly, the proposition 'God exists,' and other theological propositions, were relegated to the class of irrational statements by many in America because foundationalist thinkers failed to prove them by rational means.

Kuyperians did not quarrel with the traditionalists over the reality of foundational principles, they quarreled over what was included in the foundation and why it was included. Nicholas Wolterstorff, philosopher and strong advocate of Kuyperianism, updated Kuyper's philosophy as well as refuted foundationalism in a short, concise essay entitled Reason Within the Bounds of Religion (1976).²⁵ He observed correctly that foundationalists were repulsed by the idea of including God in the foundation because that proposition appeared refutable. The goal of the foundationalists, Wolterstorff insisted:

Is to form a body of theories from which all prejudice, bias, and unjustified conjecture have been eliminated. To attain this, we must begin with a firm foundation of certitude and build the house of theory on it by methods of whose reliability we are equally certain.²⁶

²⁴ Marsden, "Collapse," pp. 245-247.

²⁵ Nicholas Wolterstorff, Reason Within the Bounds of Religion (Grand Rapids: Wm. B. Eerdmans Publishing Co., 1976).

²⁶ Ibid, p. 24.

This goal could not be realized, foundationalists argued, if the principle 'God exists' was a foundational principle.

Wolterstorff proceeded to show the bankruptcy of classical foundationalism by demonstrating that foundationalists had no basis for believing that first principles must be derived from human reasoning. He began by arguing that the foundationalists said a theory may be accepted if it can be justified by some foundational principle.²⁷ To be justified, noted Wolterstorff, referred to the type of relation a theory bears to the foundational principles. The classic view has been deduction. But Wolterstorff pointed out that deductivism had collapsed because "many theories which seem warranted of acceptance are not deducible from any foundation."²⁸

Probabilism arose in the nineteenth century to carry the foundationalist's banner. This was an inductivist argument that stated that a theory belonged to genuine science if it was probable with respect to foundational knowledge. Inductivists argued in terms of degrees of certainty. For example, the inductivist would claim that it was probable man evolved from apes because of genotypical and phenotypical similarities. But, Wolterstorff said, the basis of uniformity needed to make even probabilistic statements acceptable was

²⁷ Ibid., p. 32.

²⁸ Ibid., p. 33.

lacking. This assumption of uniformity was itself induced and was, therefore, not part of the foundation.

But that would be to offer an inductive argument -- an inductive argument to justify the very principle we need to justify an inductive argument. In short, we are still in the situation that David Hume was in. We lack a justification for induction.²⁹

Probabilism, Wolterstorff concluded, also failed to provide the justification for the foundationalist's principles.

The third, and last, attempt by foundationalists to save their theory of justification can be found in Karl Popper's falsification theory.³⁰ The falsification theory is best stated in the negative. If a theory contradicts the foundational principles, then sufficient justification can be given to reject the theory. The problem with falsification, Wolterstorff claimed, was that rejection was rare because endless modifications could be made to a theory.³¹

Wolterstorff concluded by claiming that no one has been able to demonstrate that theories are justified by foundational principles. Deduction, induction and falsification from foundational principles do not justify accepting or rejecting theories. The foundationalists, Wolterstorff claimed, have been wrong to insist that

²⁹ Ibid., p. 36.

³⁰ Popper, Logic; and R. N. Ackerman, The Philosophy of Karl Popper (Amherst, Mass.: University of Massachusetts Press, 1976) .

³¹ Wolterstorff, Reason, pp. 38-41.

foundational principles must be rational and objective. This is a legacy, said Wolterstorff, that has consistently confused and intimidated scientists intent on honoring their Christian commitment. "Only if the sting of foundationalism is plucked will the infection subside."³²

After his critique of foundationalism, Wolterstorff advanced his theory of how theories are justified. While his philosophizing is non-historical with few references to his Neo-Calvinist past, the ties are apparent upon close examination. Since the criteria that foundational principles must be rational was shown to be arbitrary, Wolterstorff contended:

That the religious beliefs of the Christian scholar ought to function as control beliefs within his devising and weighing of theories....Their functioning as control beliefs is absolutely central to the work of the Christian scholar.³³

In other words, in true Kuyperian fashion, he insisted that the foundational principles should be religiously based. These principles are not to be derived from rational argumentation but from the subjectiveness of a persons religious world view. That is also why the title of Wolterstorff's book is so significant. Reason Within the Bounds of Religion stressed the Kuyperian relationship between human rationality and Christian principles. Reason is influenced by the religious principles

³² Ibid., p. 30.

³³ Ibid., p. 66.

that are a part of each person.

Christian foundationalists were seen by Kuyperians as hostages to a system of thought that did great damage to Christianity. To Kuyperians the omission of the existence of God from the foundational principles was a travesty. To make God the object of a philosophical or scientific proposition was to reject his sovereignty. Cornelius Van Til had this to say about the foundationalist's tendency to make God the conclusion of an argument.

To ask **whether** the tribune God of Scripture exists and **whether** the space-time world is what it is because of this God, is to presuppose that abstract possibility is back of God. A God of whom it is possible to ask intelligently **whether** he exists is not the God of Scripture....It is an insult to this God to argue for his possible existence.³⁴

D. Z. Phillips put it succinctly when he said:

We are asked to accept as the only appropriate philosophical method for establishing the rationality of religious belief, a method which actually distorts the character [God] of religious belief.³⁵

Modernists and traditionalists were essentially cut from the same philosophical cloth. Both groups relied heavily on foundationalism. Science, to the Christian foundationalists, was very important for deriving theological propositions. While all the conservative Presbyterian thinkers, such as

³⁴ Cornelius Van Til, A Christian Theory of Knowledge (New Jersey: Presbyterian and Reformed Publishing Co., 1969), p. 263.

³⁵ Phillips, Faith, p. 12.

Warfield, Hodge and Machen, accepted the efficacy of the Holy Spirit and the divine origin of Scripture, they still sought justification from reason and empirical science for these propositions. For the foundationalists who were modernists, science was used to refute the claims made by Christian foundationalists. For example, orderliness and design did not indicate the presence of a Creator but rather the presence of process and change.

The battle between traditionalists and modernists accounts for, in part, the vehemence surrounding the scientific debate regarding evolution. Each group of intellectuals viewed the relationship between science and theology differently. The modernists saw no relationship, because theology was a vestige of the primitive second stage of human development. God was only a force in nature that directed the evolutionary process. Knowledge obtained from science was the only rational and reasonable knowledge worth acquiring. The traditionalists, on the other hand, believed that theological truths could be derived from science. God was more than a force in nature, God was the end of any rational argument pursued by any right-thinking individual. Traditionalists believed that rational proof, proof that any rational person would be compelled to accept, could be presented for many theological propositions. The validity of theological propositions was dependent on a consensus in the intellectual community. And, as Marsden pointed out,

conservative traditionalists were thrown into disarray when the principles they believed were rational first principles were discarded for principles more in keeping with modernist thinking.

It is significant that none of the three models of interaction gave to theology a place of prominence equal to that offered by the Kuyperian model. The modernists and traditionalists were enamored with the certainty and strength of human reasoning and scientific methodology. Liberal theologians understood Kantian philosophy to say that theological propositions could never be known with the same degree of certainty as scientific propositions, so theological propositions became subjective and outside the realm of reason. The complementary model accepted the certainty of human reasoning but put along side it the certainty of faith and inspiration.

CONCLUSION

The Christian Reformed Church was able internally to withstand many of the changes that caused strife and confusion in theologically conservative Christian circles in the early twentieth century in America because of Kuyper's Neo-Calvinist philosophy and the complementary model of interaction between science and theology. It could be argued that the status quo is not always advantageous and that change is preferable to stagnation. But, conservative Protestant theology suffered severe setbacks during the years 1900 to 1930, while the theology of the Christian Reformed Church suffered little. In fact, the denomination emerged from this period stronger than when it entered the twentieth century. It possessed a definite view of the role and function of both theology and science.

Theology and the sciences were both human endeavors which sought to understand the cosmos. The Kuyperian idea that they were separate but equally important was essential for this balanced view. Neither discipline was seen as more important but the concept of the "organism of science" and Kuyper's reliance on principles ensured that all disciplines would be viewed as parts of a whole. The leadership of the Christian Reformed Church possessed a philosophical system that gave them assurance and strength in times of trouble.

The philosophical position of the Christian Reformed Church resulted in three attitudes that encouraged stability

and unity. First, conflict and compromise between science and theology were minimized. Secondly, science and theology were given freedom to grow and mature. And, thirdly, the very presence of a unifying philosophical system provided an anchor during those troubling decades.

Conflict between science and theology was virtually eliminated by removing the conflict to the realm of principles and world views. The world of facts, in which both science and theology operated, was one large, unified body created by God. It was logically impossible for a fact of science to contradict a fact of theology. There was no fear that science would suddenly discover something that caused one to abandon the faith. When conflict arose, the explanation was sought elsewhere than in the world of facts. The source of the conflict was sought within the hearts and minds of humans.

Conflict was seen as the product of sin. First, a scientist could observe incorrectly, use faulty reasoning or succumb to a bias. All these human errors could explain why scientific observations seem to contradict theological propositions. However, if human error was ruled out and conflict still existed, the source of the conflict was found in the principles and world views held. Principial analysis became the key to understanding ultimate conflicts.

Principial analysis was motivated by the antithesis. Since there were really only two sets of principles, those that glorified God and those that glorified humanity,

discovering which set motivated a particular response to facts was often straight-forward. The heart and motives of the individual were investigated, not the objective world of facts. Principial analysis was an attempt to understand why opposing theories existed for the same group of facts. The Kuyperians employed this tool to diffuse the tension between theology and science.

While conflict was minimized by principial analysis, sphere sovereignty eliminated the need for compromise between science and theology. The sphere of theology was a complete unity in and of itself as were the spheres of politics and art and science. These spheres came together only in the sense that they were parts of God's creation and assisted in adding pieces to the organism of Truth. Theology was to keep itself from being entangled in the sphere of science and vice versa. Theology was not forced to compromise with the findings of science. They were both to glorify God but theology was under no obligation to use scientific methodology or adopt scientific conclusions.

The absence of conflict and compromise were particularly important for the conservative theology of the denomination. Theological propositions, which were unashamedly unscientific, were accepted without excuse or apology. Science, in the Christian Reformed Church supported and encouraged the claims of theology. Theology occupied the place of prominence it held

in seventeenth-century Calvinist thinking, but with one major difference -- science, too, was highly esteemed.

Due to the lack of conflict and compromise, both science and theology were given the freedom to explore, to grow, and to mature. Retrenchment, or the presence of a "fortress mentality," was absent in Christian Reformed thinking. A balanced view of science and scientific discoveries resulted from this attitude. The negative fundamentalist response to science was condemned by Christian Reformed intellectuals. Scientists were not vilified as atheists or pseudo-intellectuals. As a result, the general anti-intellectualism that was prevalent in much of theologically conservative Christianity from the 1920's to the late 1940's was avoided by the Christian Reformed Church.

Finally, the very presence of a unified philosophical system provided stability and cohesiveness during this stormy period in American religious history. Regardless of how the system was received outside Christian Reformed enclaves, internally it provided a coherent world view and answers to troubling questions. Kuyper's philosophy helped church leaders explain the nature of knowledge, the substance of Truth, the role of facts, the role of principles and the importance of the subjective. Their system of thought provided adequate defense against the encroachments of theological liberalism and scientific positivism.

Historically, theology and science have had much in common. Theology and science ask the two most important questions asked by humanity: "Why?" and "How?". To ask either question without the other, is to receive an incomplete or biased answer. But that is not to say that science should ask "why?". Science, and rightly so, should avoid teleological and theological answers. Theology, on the other hand, should avoid answering questions that are better left to the scientist. Science and theology should be encouraged, however, to freely share the answers to their respective questions. Not only to share answers, but to integrate these answers into a unified position. The complementary model of the Christian Reformed Church was an attempt at integration of the knowledge obtained by science and theology.

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INTERACTION OF SCIENCE AND THEOLOGY
IN THE CHRISTIAN REFORMED CHURCH, 1900-1930

by

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The years from 1880 to 1930 were turbulent years in Protestant American history. By the end of the nineteenth century, theology lost its status as the "queen of the sciences" and the sciences (those that were empirically based) gained status and prestige to the point that the nineteenth century has been called the "age of science". A key to the turmoil in Protestant religion in American can be found in the study of the interaction between science and theology.

This study seeks to understand the origin, nature and implications of the Christian Reformed model of interaction between science and theology, called the complementary model. Complementarity implies an equality among the parts that comprise the whole and a great degree of harmony but independence among the parts. It is the contention of this thesis that the complementary model aided the church's intellectuals in maintaining conservative theological thinking as well as accepting much of modern scientific thought. Further, the model represented a view that was different from the major models of the period; the models of the traditionalists, theological liberals and modernists. To provide the context for a discussion of the Christian Reformed model, an understanding of certain general characteristics of the denomination and the ethnic group that made up the denomination is needed. Chapter 1 investigates the homogeneity, philosophical disposition and religious tendencies of the denomination. Homogeneity was a result of the denominations close association with a small ethnic group

of Dutch-Americans. Philosophically this homogenous group favored the speculative, system-building, idealistic philosophies of Germany. They were suspicious of the empiricism and realism of the British. This philosophical disposition put them at odds with the Baconianism and Common Sense Realism so prevalent in American thinking. Finally, their religious system was evangelical but not fundamentalistic.

Chapter two investigates the philosophical influence of Abraham Kuyper, Dutch theologian and statesman, in the construction of the complementary model. Kuyper's philosophical system became known as Neo-Calvinism. The distinctiveness of this system was the synthesis of Reformation (Calvinist) principles into a Kantian philosophical structure. This synthesis resulted in the significant proposition that both theological and empirical knowledge were subjective and, therefore, epistemologically equal.

A detailed examination of the structure of the complementary model is undertaken in Chapter three. Elaboration on Kuyper's epistemological equality, sphere sovereignty and principialism represent the key elements of the model. Epistemological equality provided the philosophical justification for the model. Sphere sovereignty provided the functional means whereby science and theology were kept separate. Finally, principialism provided the justification for harmony between science and theology as well as the

explanation for the reality of disharmony.

Finally, chapter four investigates the traditionalist, modernist, and liberal models of interaction. The chapter examines how they differed from the Christian Reformed model and how they were similar.

The complementary model aided in minimizing conflict and compromise between science and theology in the Christian Reformed Church. Science and theology were also given freedom to grow and mature independently. Finally, the presence of a unifying philosophical position provided stability during those turbulent decades in American religious history.